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720
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960
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1140
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1920
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1980
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5000

ttcttttttt aaatgtaagg accaaacttc taaactaatt gttcttttgt tgctttaatt
2100
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2216

<210> 5832
<211> 322
<212> PRT
<213> Homo sapiens

<400> 5832
Gly Leu Glu Pro Gly Ile Gln Ile Gln Glu Glu Val Asn Ile Pro Asn
1   5   10   15
Arg Arg Val Leu Val Thr Gly Ala Thr Gly Leu Leu Gly Arg Ala Val
            20   25   30
His Lys Glu Phe Gln Gln Asn Asn Trp His Ala Val Gly Cys Gly Phe
        35   40   45
Arg Arg Ala Arg Pro Lys Phe Glu Gln Val Asn Leu Leu Asp Ser Asn
    50   55   60
Ala Val His His Ile Ile His Asp Phe Gln Pro His Val Ile Val His
65   70   75   80
Cys Ala Ala Glu Arg Arg Pro Asp Val Val Glu Asn Gln Pro Asp Ala
                85   90   95
Ala Ser Gln Leu Asn Val Asp Ala Ser Gly Asn Leu Ala Lys Glu Ala
                100   105   110
Ala Ala Val Gly Ala Phe Leu Ile Tyr Ile Ser Ser Asp Tyr Val Phe
            115   120   125
Asp Gly Thr Asn Pro Pro Tyr Arg Glu Glu Asp Ile Pro Ala Pro Leu
    130   135   140
Asn Leu Tyr Gly Lys Thr Lys Leu Asp Gly Glu Lys Ala Val Leu Glu
145   150   155   160
Asn Asn Leu Gly Ala Ala Val Leu Arg Ile Pro Ile Leu Tyr Gly Glu
                165   170   175
Val Glu Lys Leu Glu Glu Ser Ala Val Thr Val Met Phe Asp Lys Val
                180   185   190
Gln Phe Ser Asn Lys Ser Ala Asn Met Asp His Trp Gln Gln Arg Phe
    195   200   205
Pro Thr His Val Lys Asp Val Ala Thr Val Cys Arg Gln Leu Ala Glu
    210   215   220
Lys Arg Met Leu Asp Pro Ser Ile Lys Gly Thr Phe His Trp Ser Gly
225   230   235   240
Asn Glu Gln Met Thr Lys Tyr Glu Met Ala Cys Ala Ile Ala Asp Ala
                245   250   255
Phe Asn Leu Pro Ser Ser His Leu Arg Pro Ile Thr Asp Ser Pro Val
            260   265   270
Leu Gly Ala Gln Arg Pro Arg Asn Ala Gln Leu Asp Cys Ser Lys Leu
    275   280   285
Glu Thr Leu Gly Ile Gly Gln Arg Thr Pro Phe Arg Ile Gly Ile Lys
    290   295   300
Glu Ser Leu Trp Pro Phe Leu Ile Asp Lys Arg Trp Arg Gln Thr Val
305   310   315   320
Phe His

5001

<210> 5833
<211> 805
<212> DNA
<213> Homo sapiens

<400> 5833
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120
cctaaacctg tgctccagga agaaaacaac caagagtctt ttattgcatt tgctcgggtg
180
ttcagtggtg tggctcgaag aggaaagaaa attttttgtct tggggcccaa atacagtcct
240
cttgagtttt tacgaagggt accattaggc ttctcagctc caccagatgg cctcccccaa
300
gtcccccaca tggcatactg tgctctggaa aacctgtatc ttctgatggg aagggaactg
360
gaatatctag aggaggtacc tccaggaaat gtgctaggaa taggaggcct tcaagatttt
420
gtgctgaaat ctgcaacact gtgtagcctg ccatcctgcc caccatttat accactcaac
480
ttcgaagcca ctcctattgt gagagttgct gttgaaccaa aacatccaag tgaaatgcct
540
cagctcgtaa aaggaatgaa actgttaaac caggctgatc cctgtgtcca gattttaatt
600
caggaaacgg gagagcacgt tttagtcaca gcaggagaag tccaccttca gcgatgcctg
660
gatgacttaa aagaaaggtt tgcaaagatt catatcagtg tatctgaacc tattattcca
720
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780
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805

<210> 5834
<211> 268
<212> PRT
<213> Homo sapiens

<400> 5834
Lys Leu Ala Ala Ala Gln Gly Gln Ala Pro Leu Glu Pro Thr Gln Asp
1   5   10   15
Gly Ser Ala Ile Glu Thr Cys Pro Lys Gly Asp Glu Pro Arg Gly Asp
            20   25   30
Glu Gln Gln Val Glu Ser Met Thr Pro Lys Pro Val Leu Gln Glu Glu
        35   40   45
Asn Asn Gln Glu Ser Phe Ile Ala Phe Ala Arg Val Phe Ser Gly Val
    50   55   60
Ala Arg Arg Gly Lys Lys Ile Phe Val Leu Gly Pro Lys Tyr Ser Pro
65   70   75   80
Leu Glu Phe Leu Arg Arg Val Pro Leu Gly Phe Ser Ala Pro Pro Asp

```
                    85                  90                  95·
Gly Leu Pro Gln Val Pro His Met Ala Tyr Cys Ala Leu Glu Asn Leu
                100                 105                 110
Tyr Leu Leu Met Gly Arg Glu Leu Glu Tyr Leu Glu Glu Val Pro Pro
            115                 120                 125
Gly Asn Val Leu Gly Ile Gly Gly Leu Gln Asp Phe Val Leu Lys Ser
        130                 135                 140
Ala Thr Leu Cys Ser Leu Pro Ser Cys Pro Pro Phe Ile Pro Leu Asn
145                 150                 155                 160
Phe Glu Ala Thr Pro Ile Val Arg Val Ala Val Glu Pro Lys His Pro
                165                 170                 175
Ser Glu Met Pro Gln Leu Val Lys Gly Met Lys Leu Leu Asn Gln Ala
                180                 185                 190
Asp Pro Cys Val Gln Ile Leu Ile Gln Glu Thr Gly Glu His Val Leu
            195                 200                 205
Val Thr Ala Gly Glu Val His Leu Gln Arg Cys Leu Asp Asp Leu Lys
        210                 215                 220
Glu Arg Phe Ala Lys Ile His Ile Ser Val Ser Glu Pro Ile Ile Pro
225                 230                 235                 240
Phe Arg Glu Thr Ile Thr Lys Pro Pro Lys Val Asp Met Val Asn Glu
                245                 250                 255
Glu Ile Gly Lys Gln Gln Lys Val Ala Val Ile His
            260                 265
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<210> 5835
<211> 420
<212> DNA
<213> Homo sapiens

<400> 5835

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120
gcactgcata agcaagttct tatgggccca tataatccag acacttgtcc tgaggttgga
180
ttctttgatg tgttggggaa tgacaggagg agagaatggg cagccctggg aaacatgtct
240
aaagaggatg ccatggtgga gtttgtcaag ctcttaaata ggtgttgcca tctctttttca
300
acatatgttg cgtcccacaa aatagagaag gaagagcaag acaaaaaaag gaaggaggaa
360
gaggagcgaa ggcggcgtga agaggaagaa agagaacgtc tgcaaaagga ggaagagaaa
420
```

<210> 5836
<211> 140
<212> PRT
<213> Homo sapiens

<400> 5836

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Xaa Leu Glu Gln Arg Trp Gly Phe Gly Leu Glu Glu Leu Tyr Gly Leu
 1               5                  10                  15
Ala Leu Arg Phe Phe Lys Glu Lys Asp Gly Lys Ala Phe His Pro Thr
```

```
            20                  25                  30
Tyr Glu Glu Lys Leu Lys Leu Val Ala Leu His Lys Gln Val Leu Met
        35                  40                  45
Gly Pro Tyr Asn Pro Asp Thr Cys Pro Glu Val Gly Phe Phe Asp Val
    50                  55                  60
Leu Gly Asn Asp Arg Arg Arg Glu Trp Ala Ala Leu Gly Asn Met Ser
65                  70                  75                  80
Lys Glu Asp Ala Met Val Glu Phe Val Lys Leu Leu Asn Arg Cys Cys
            85                  90                  95
His Leu Phe Ser Thr Tyr Val Ala Ser His Lys Ile Glu Lys Glu Glu
            100                 105                 110
Gln Asp Lys Lys Arg Lys Glu Glu Glu Glu Arg Arg Arg Arg Glu Glu
        115                 120                 125
Glu Glu Arg Glu Arg Leu Gln Lys Glu Glu Glu Lys
    130                 135                 140
```

<210> 5837
<211> 582
<212> DNA
<213> Homo sapiens

<400> 5837
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tgttgtttct ggcccgttgg catcgctgcc ttctgtctag cccagaagac caacaaggct
120
tgggccaagg gggacatcca gggggcaggg ccgcctccc gccgtgcctt cctgctgggg
180
gtcctcgccg tcgggctggg cgtgtgcacg tatgcggctg ccctggtgac cctggccgcc
240
taccttgcct cccgagaccc gccctagttg cccctacagc cctcactgtg aaccctgagg
300
ccggcagccc agcaaatctg tgggcagaga gtggagaatc ttggtggatg aggctgcggc
360
ggcggcagga gcatctagaa acgggagcga gctggactgg aacccttccc cttcctggcc
420
accgctcttc gggcggcagc aacctgagat taaacaccag acacccttgg cctgggctca
480
cgaggaaggg gctgcagttc tccaaggatt cccgcctgct cccagatccc cgggagtcgt
540
aggaacccgt tcctggacgc tgacgtcggc tttcagggat cc
582
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<210> 5838
<211> 88
<212> PRT
<213> Homo sapiens

<400> 5838
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Xaa Arg Leu Ser Pro Phe Leu Pro His Asp His Leu Gly Leu Ala Val
1               5                   10                  15
Phe Ser Met Leu Cys Cys Phe Trp Pro Val Gly Ile Ala Ala Phe Cys
            20                  25                  30
Leu Ala Gln Lys Thr Asn Lys Ala Trp Ala Lys Gly Asp Ile Gln Gly
```

```
         35                    40                   45
Ala Gly Ala Ala Ser Arg Arg Ala Phe Leu Leu Gly Val Leu Ala Val
    50                    55                   60
Gly Leu Gly Val Cys Thr Tyr Ala Ala Ala Leu Val Thr Leu Ala Ala
65                    70                   75                   80
Tyr Leu Ala Ser Arg Asp Pro Pro
                85
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<210> 5839
<211> 1895
<212> DNA
<213> Homo sapiens

<400> 5839

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aaatattaaa caataaataa aacagagcgg gggctgagga aagcaggatc ttgctgaagt
120
cattcgaatg catcccaacc agtgctcagc tgcgtaacga catggagaga ggcaggggggg
180
aatagaaagc aaatttaaaa acaccaacac ccaaacacac aagactgcac acaagaaaaa
240
gtgctcaaga aactttggct ttgaagggaa ttcagtgaag ggaagcgatt gtgcaggagg
300
aagggaagaa acccacgatc accctaaggg gcgggggggct ggagggcgag gccctgagac
360
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720
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1080
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1140
cgtttcccta aagaatcacc cagatcttaa ctgccctctc caccttcttt ttttttcccc
1200
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tcctatttta cattctattt tctcatatcc agctttctc tctaagccta accaaatgct
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1320
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1380
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1440
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1500
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1620
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1740
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1860
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1895

<210> 5840
<211> 138
<212> PRT
<213> Homo sapiens

<400> 5840
Met Ala Cys Ser His Ile Cys Cys Lys Pro Asp Val Cys Asp Gly Tyr
1   5   10   15
Asn Asp Thr Pro Gly Ala Leu Leu Arg Gly Glu Asp Arg Cys Trp Phe
            20   25   30
Leu Met Val His Gly Trp Cys Pro Val Ile Phe Ser Trp Ala Val Ala
        35   40   45
Pro Arg Gly Ser Gly Phe Pro Ala Gln Gly Ile Phe Asp Pro Cys Gln
        50   55   60
Arg Arg Glu Arg Glu Leu Ser Trp Phe Pro Phe His Leu Phe Ser Gly
65   70   75   80
Cys Phe Lys Ala Asn Ile Pro Val Pro Asn Val Leu Cys Gly Leu Asn
                85   90   95
Pro Gly Arg Gly Gln Gly His Ile Gln Val Gly Leu Ala Ser Ser Thr
            100   105   110
Thr Phe Trp Pro Gln Gln Arg Met Gly Phe His Gln Ser Leu Ser Thr
        115   120   125
Ser Arg Phe Pro Lys Glu Ser Pro Arg Ser
        130   135

<210> 5841
<211> 3411
<212> DNA
<213> Homo sapiens

<400> 5841
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120
ttctcggacc ttcccagcgg caccctcaat tttcacccgg tgtggacatc tcgaacttgc
180
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240
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300
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360
gttcggcaac atgaggaatt tatctggctt catgattcct ttgttgaaaa tgaagactat
420
gcaggttata tcattccacc agcaccacca agacctgatt ttgatgcttc aagggaaaaa
480
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660
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720
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1560

5007

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3180

5008

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3411

<210> 5842
<211> 460
<212> PRT
<213> Homo sapiens

<400> 5842
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Ala Lys Trp Lys Trp Arg Arg Glu Met Glu Arg Pro His Pro Pro Ser
            20   25   30
Thr Leu Trp Gly His Glu Asn Pro Phe Ser Asp Leu Pro Ser Gly Thr
        35   40   45
Leu Asn Phe His Pro Val Trp Thr Ser Arg Thr Cys Ser Arg Pro Pro
    50   55   60
Phe Cys Leu Ser Gln Ile Val Gln Leu Lys Ala Ile Asn Val Asp Leu
65   70   75   80
Gln Ser Asp Ala Ala Leu Gln Val Asp Ile Ser Asp Ala Leu Ser Glu
                85   90   95
Arg Asp Lys Val Lys Phe Thr Val His Thr Lys Ser Ser Leu Pro Asn
            100   105   110
Phe Lys Gln Asn Glu Phe Ser Val Val Arg Gln His Glu Glu Phe Ile
        115   120   125
Trp Leu His Asp Ser Phe Val Glu Asn Glu Asp Tyr Ala Gly Tyr Ile
    130   135   140
Ile Pro Pro Ala Pro Pro Arg Pro Asp Phe Asp Ala Ser Arg Glu Lys
145   150   155   160
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Asp Gln Tyr Ser Tyr Cys Thr Pro Ser His Ile Pro Phe Ser Asn Arg
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Ser Gly Phe Tyr Trp Asn Gly Val Ala Val Phe Pro Lys Pro Pro Pro
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Asp Gly Val Tyr Pro Asn Met Ser Glu Pro Val Thr Pro Ala Asn Ile
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Asn Leu Tyr Ala Glu Ala Leu Val Ala Asn Val Lys Gln Arg Ala Ala
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Trp Phe Arg Thr Pro His Val Leu Trp Pro Trp Gly Cys Asp Lys Gln
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5014

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2762


<210> 5846
<211> 257
<212> PRT
<213> Homo sapiens

<400> 5846
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Glu	Ala	Cys	Glu	Arg	Ser	Leu	Ala	Glu	Met	Glu	Ser	Ser	His	Gln	Gln
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Val	Met	Glu	Glu	Leu	Gln	Arg	His	His	Glu	Arg	Glu	Leu	Gln	Arg	Leu
		20					25					30			
Gln	Gln	Glu	Lys	Glu	Trp	Leu	Leu	Ala	Glu	Glu	Thr	Ala	Ala	Thr	Ala
		35					40					45			
Ser	Ala	Ile	Glu	Ala	Met	Lys	Lys	Ala	Tyr	Gln	Glu	Glu	Leu	Ser	Arg
	50					55					60				
Glu	Leu	Ser	Lys	Thr	Arg	Ser	Leu	Gln	Gln	Gly	Pro	Asp	Gly	Leu	Arg
65					70					75					80
Lys	Gln	His	Gln	Ser	Asp	Val	Glu	Ala	Leu	Lys	Arg	Glu	Leu	Gln	Val
			85					90					95		
Leu	Ser	Glu	Gln	Tyr	Ser	Gln	Lys	Cys	Leu	Glu	Ile	Gly	Ala	Leu	Met
		100					105					110			
Arg	Gln	Ala	Glu	Glu	Arg	Glu	His	Thr	Leu	Arg	Arg	Cys	Gln	Gln	Glu
	115					120					125				
Gly	Gln	Glu	Leu	Leu	Arg	His	Asn	Gln	Glu	Leu	His	Gly	Arg	Leu	Ser
	130					135					140				
Glu	Glu	Ile	Asp	Gln	Leu	Arg	Gly	Phe	Ile	Ala	Ser	Gln	Gly	Met	Gly
145					150					155					160
Asn	Gly	Cys	Gly	Arg	Ser	Asn	Glu	Arg	Ser	Ser	Cys	Glu	Leu	Glu	Val
			165					170					175		
Leu	Leu	Arg	Val	Lys	Glu	Asn	Glu	Leu	Gln	Tyr	Leu	Lys	Lys	Glu	Val
			180					185					190		
Gln	Cys	Leu	Arg	Asp	Glu	Leu	Gln	Met	Met	Gln	Lys	Asp	Lys	Arg	Phe
		195					200					205			
Thr	Ser	Gly	Lys	Tyr	Gln	Asp	Val	Tyr	Val	Glu	Leu	Ser	His	Ile	Lys

```
           210                  215                  220
·Thr Arg Ser Glu Arg Glu Ile Glu Gln Leu Lys Glu His Leu Arg Leu
225                  230                  235                  240
Ala Met Ala Ala Leu Gln Glu Lys Glu Ser Met Arg Asn Ser Leu Ala
                245                  250                  255
Glu
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<210> 5847
<211> 1021
<212> DNA
<213> Homo sapiens

<400> 5847
ggcacgagct cgtgcggccg ggtgagagcg tgcggccgga ttcaccacaa catggcaaat
60
cttttttataa ggaaaatggt gaaccctctg ctctatctca gtcgtcacac ggtgaagcct
120
cgagccctct ccacatttct atttggatcc attcgaggtg cagccccgt ggctgtggaa
180
cccggggcag cagtgcgctc acttctctca cccggcctcc tgccccatct gctgcctgcg
240
ctggggttca aaaacaagac tgtccttaag aagcgctgca aggactgtta cctggtgaag
300
aggcggggtc ggtggtacgt ctactgtaaa acccatccga ggcacaagca gagacagatg
360
tagacccttt ccctccagag tcacgcacat actcgtcatc gcatcacttg ggagaatggt
420
tgtatcttat ggaaggaatt atcacatcaa ggagtcaggg gaaagtgact ggaagcaaac
480
gccctaaaag ttacccatca cgtttcagtg taaatgagta actatagaag acattgcgtt
540
atcttatttc caaaacgttc caactaaaaa acattttcct attaaaatag accttccgaa
600
tagcttagtt cattcattct ctctgaactc aggctgcagg tagggattgg atggtgctgg
660
gtgaggctgg gcaggacttc tctatgtctc cgtgaggctg cttagagcct cttggaagaa
720
gtggtgtttt ggtcacccgt cgctgtacaa gccaaggctt ggtggcttaa atcagccatt
780
ttacattgtt cacgattttg tgaggcattt gggatgggct cagctgagca gtttgtctga
840
tctgtgtggc attaactgca ggacccactt ccaagatggc accggctctc ctgtctgggg
900
tctcagtgct cctcaggctg tacgtagcac ctcctcaggc agggcccaca gcgtgctttg
960
cactgcccca cagtgagctt cccgagagtg ttccgagaga cccaagcaga tgctacgagg
1020
c
1021
```

```
<210> 5848 ·
<211> 120
<212> PRT
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<213> Homo sapiens

<400> 5848
Gly Thr Ser Ser Cys Gly Arg Val Arg Ala Cys Gly Arg Ile His His
1   5   10   15
Asn Met Ala Asn Leu Phe Ile Arg Lys Met Val Asn Pro Leu Leu Tyr
            20   25   30
Leu Ser Arg His Thr Val Lys Pro Arg Ala Leu Ser Thr Phe Leu Phe
        35   40   45
Gly Ser Ile Arg Gly Ala Ala Pro Val Ala Val Glu Pro Gly Ala Ala
    50   55   60
Val Arg Ser Leu Leu Ser Pro Gly Leu Leu Pro His Leu Leu Pro Ala
65   70   75   80
Leu Gly Phe Lys Asn Lys Thr Val Leu Lys Lys Arg Cys Lys Asp Cys
                85   90   95
Tyr Leu Val Lys Arg Arg Gly Arg Trp Tyr Val Tyr Cys Lys Thr His
            100   105   110
Pro Arg His Lys Gln Arg Gln Met
            115   120

<210> 5849
<211> 3174
<212> DNA
<213> Homo sapiens

<400> 5849
nttttttttt ttaccaacgg gagatgcagt ttatttacac cagcagccat gggggcagag
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ggaatacaca gcgtttacaa agttagctac ctgtacagaa tggattacat atgcaaaaat
120
aaaaatctca agaccacagg acagcgtgag ccccacccccc ctcccccaat gaccccagca
180
tgcggtaatg ccaggcgggt ggcccctggg catgcggggg ggagtgatgc atggaaggaa
240
aagccaccgg ccatggaaat tagtacagaa ccccccccaca cacactcaga cacaggatac
300
agggtggacg acacctagcc ggggtgggaa ggatgggaat tgaaacccac acagcctgct
360
gttagaggga ggggagtggg gagctcctag cccctgttca actacatggt agggggggggc
420
actctctccc cagaaggaaa agggtttgtt ccctcagggt ccctgctgga ccaagcccat
480
ctcttaccca gcctgggcag ggggctctgc cctgagggcg ggccaaggaa caatggggaa
540
gtttatgtgg acaaaccagt tcccaagcta cttcccactt ctccctcctc caaccagaag
600
gggggaaaag ggagaggcca cagggcaaag agtgtattag ggcctgagct gcagctgcct
660
ctcagaaggg agagtggccc acagccttcc tcccttcacc ttcagcccac tccccagact
720
gcatctggaa gcggctagag gcctgctgag atcctcctct ccctctggcc tcctctcgga
780
gggagactac ggagggccaa gaatagagaa gcccaggccc cgggatttat tctaactcct
840

gccaaaawyy mmttggcttt ttaaaaaata atcacaattt gtgggttaaa aaccaatttg
900
caaccaggca tgagccacaa tcagaaccac cccagcggga gagcggagtt ccagacaggg
960
nattgcagcc ccatctctgt tgttcccttta accctctagg gtccctaacc cgatcagtcc
1020
aaccagtcct gggtactaac tacccaaatg tgggatggct cctcttggga agagggtagg
1080
ggacatgtcc agcaagtgcc agagaacttg gctcagggtc aactccaccc cgtgtcagtc
1140
agctctgctc ccagcccags msgsggtcct ccagsttggy tcctgggagt ngnggtgccc
1200
gcatmgaggg gggacggtac atctctttag gatgtagacc aggcaggtgg gcacactggc
1260
atgacagtcc cacagagggg cagtgacacc ccttcccctc cactgacaac ctggggcaca
1320
gaggccaccc tctcttccca cccaactcct agcaaagggg gagaggcaca agattaggat
1380
tttcctcaga gccccaaacc acaagtacag aataaataac ttaaaagcgc taaggaaggg
1440
aaacagggca cgctttggag gcaggagcgc tgagaggaac tgaagccagt caaggtgaag
1500
ggggtggaag cagcagttgg gaacctgggc tgccccggta gggcagtggg gcagggtggg
1560
caggaggaac acggggccac cccaggaggg tgaggctggg tcccttcctg gggcagggaa
1620
tgaggtaaga aaacatttca aataaagcag caccgttccc tctcaccttg gggccccact
1680
cctcaccagc cctgggtcag ggaggagagg caggggagg aattctgaca cttctccctc
1740
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1800
ccaacaaaag gacagctcct gctgccaagg aggcccatgg ggactgaggg gaaagggctg
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cccctgtgag gggcagggaa ggtggcggca gttctggacg cccacctcag cagacagcac
1920
tctgtgcctg cctacccctg ggactggggg catttgataa gattctgcac acagacagga
1980
catgcccagc cttgcccctc agctccaagc accggaccca ttcacattgc tgagggcggc
2040
cgaggcaggc cccctccagg ctcagcttcc aacccacagc ctcccgggtc gccacattgc
2100
ccctcagcag ggcttagtcc agttcctggg gtggggggca ggcagtgccc tggcacagtg
2160
cccagggtca ggcgccctgg cctagctgga catccagtaa ctcacagaat aaataggaaa
2220
accgcctccc caccaaactt atgtccaagg cataatatgt ccaggtctga gtcctgcacg
2280
ccgaggagtc gtgctccatt gcagaggact ttgacacccc ccaggggcgc ataatcggat
2340
cctctgcctg cctggcccac caagcttccc aagccccaac ccccagcagc cgtccatttg
2400
ccaggctatg ccacctgggt gggggtcagg agagagggct ctgctcagcc aaaggctatc
2460

ccttgcaccc aagtcagttg atgtcatcat agatgctggg cgtcgggggt gccggtggct
2520
ttggcttctt cttcttgttg gaacctaggc cggaggcagt ccctaccagg ctcagatggg
2580
atttcttttt cttggttttc cgtgactcag agctgttggt acctagaccc catccctgat
2640
tttcactcgt cttggaggag cctgaatcag agggtgagag gtcagaggag ccgtcccact
2700
gaagccggct gatcagggcc tggctgtcag tcatgtcaaa gctgtcatta tccagggagc
2760
tctcgacctc tggaaggaca gccgagggcc cgagaaaata aatccgtacg gttcgcctct
2820
gctcatctgt gtgctgtggg cagcgcaggg accttgtgca catcttcttg gtgtgttcag
2880
aaatcacccc acattgcgtg gttagcaggc tgcgaagctc ctccggcccc agggtctcat
2940
agctgatccc agttgaattg ttatacttaa aaggatccga attgctaagt tccccatttt
3000
tgtgtttaa tgacttggat cttcgagggg aattggggtt ctggaatggg agataccata
3060
gctttgggga aagggtaacg aaaagggga gccgagaacc cagggaagga aaaaagattt
3120
gacaaagcag catcctcaaa ttcctactct tcctccccag taggaggcct gtct
3174

<210> 5850
<211> 154
<212> PRT
<213> Homo sapiens

<400> 5850
Gly Ala Gly Lys Val Ala Ala Val Leu Asp Ala His Leu Ser Arg Gln
1   5   10   15
His Ser Val Pro Ala Tyr Pro Trp Asp Trp Gly His Leu Ile Arg Phe
            20   25   30
Cys Thr Gln Thr Gly His Ala Gln Pro Cys Pro Ser Ala Pro Ser Thr
        35   40   45
Gly Pro Ile His Ile Ala Glu Gly Gly Arg Gly Arg Pro Pro Pro Gly
    50   55   60
Ser Ala Ser Asn Pro Gln Pro Pro Gly Ser Pro His Cys Pro Ser Ala
65   70   75   80
Gly Leu Ser Pro Val Pro Gly Val Gly Gly Arg Gln Cys Pro Gly Thr
            85   90   95
Val Pro Arg Val Arg Arg Pro Gly Leu Ala Gly His Pro Val Thr His
            100   105   110
Arg Ile Asn Arg Lys Thr Ala Ser Pro Pro Asn Leu Cys Pro Arg His
        115   120   125
Asn Met Ser Arg Ser Glu Ser Cys Thr Pro Arg Ser Arg Ala Pro Leu
    130   135   140
Gln Arg Thr Leu Thr Pro Pro Arg Gly Ala
145   150

<210> 5851
<211> 488

<212> DNA
<213> Homo sapiens

<400> 5851
ttttttttttt tatgaaaaaa gcagcaactc tttagtgatc atggaattaa tctgacagca
60
attaaatgtg tttaagcatc tggcatatct cctcaattgc accaaaagaa tttggaagca
120
cttggtttgg tctcaaaggc aaaaggaaag gacgaggaag gggccaggcc tcccgccagg
180
ccccgcccc cctcacattt ctgagtccgc atacatcccg ttgattaagt agtccacctg
240
ggtgtagtcc ttcttcttgt agctctcata ggcatctgtc ctgcttgtgt cctctgttgt
300
gacttccata gagttgaggt gggctgccga agtccctttg gtcaatgtga caggagaagc
360
tgctgccatg gttacatcct cagacgtttt attatcaact gtttccacag atgcattcct
420
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480
tgacgcgt
488

<210> 5852
<211> 82
<212> PRT
<213> Homo sapiens

<400> 5852
Met Trp Lys Gly Leu Val Lys Arg Asn Ala Ser Val Glu Thr Val Asp
1   5   10   15
Asn Lys Thr Ser Glu Asp Val Thr Met Ala Ala Ala Ser Pro Val Thr
            20   25   30
Leu Thr Lys Gly Thr Ser Ala Ala His Leu Asn Ser Met Glu Val Thr
            35   40   45
Thr Glu Asp Thr Ser Arg Thr Asp Ala Tyr Glu Ser Tyr Lys Lys Lys
        50   55   60
Asp Tyr Thr Gln Val Asp Tyr Leu Ile Asn Gly Met Tyr Ala Asp Ser
65   70   75   80
Glu Met

<210> 5853
<211> 487
<212> DNA
<213> Homo sapiens

<400> 5853
nacgcgtgaa gggaatggaa ggtgcagaga ccagagctga gggaggcttc aggggattac
60
agacggtctc aagagggagg cccagcccgt cccgcggccc ctgacacccc atcaggccgc
120
tcaggcccag cagctccatg gaggacgccg gcgaggaccc caccgtttt gctgcccact
180

ctctgcccag tgaccccgt ctcttggcca ctgtgaccaa cgcatacctg ggcacacgag
240
tgtttcacga cacgctgcac gtgagcggcg tgtacaatgg ggctggcggg gacacgcacc
300
gggccatgct gcccagcccc ctcaacgtcc ggctggaggc ccccgcaggg atgggggagc
360
agctgaccga gaccttcgcc ctggacacca acacaggctc ctttcttcac accctggagg
420
gcccccgctt ccgggcctcc cagtgcatct atgcgcatcg cacgctgccc cacgtgctgg
480
ctttccg
487

<210> 5854
<211> 68
<212> PRT
<213> Homo sapiens

<400> 5854
Arg Glu Trp Lys Val Gln Arg Pro Glu Leu Arg Glu Ala Ser Gly Asp
 1   5   10   15
Tyr Arg Arg Ser Gln Glu Gly Gly Pro Ala Arg Pro Ala Ala Pro Asp
            20   25   30
Thr Pro Ser Gly Arg Ser Gly Pro Ala Ala Pro Trp Arg Thr Pro Ala
        35   40   45
Arg Thr Pro Pro Arg Leu Leu Pro Thr Leu Cys Pro Val Thr Pro Val
    50   55   60
Ser Trp Pro Leu
65

<210> 5855
<211> 362
<212> DNA
<213> Homo sapiens

<400> 5855
gcgcgccagg ggcagggggag ggatggagcc agcgagggtc gggatagcga gcgagggtgg
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gagggactcc gtaacagccc ctctgtgctc agcggatccc cttctagcag tccctccctc
120
tcctcccgac cctcccgcag gcacctgctg ggggctgtgg ggcccaaagc gggagggagt
180
taacgaggtt gttgcagaag tcctcctggc ggcacacgaa ggtgtaggag atcagggaga
240
ggccggggcc catccggtgc tcagtgacgc ggggctcctg gtccttggcc tccgtgcagc
300
ccttggagag caccaggctc acttggggtc cgctctcaat gagcatcaac gtgtcctggc
360
an
362

<210> 5856
<211> 113
<212> PRT

5024

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<213> Homo sapiens

<400> 5856
Met Glu Pro Ala Arg Val Gly Ile Ala Ser Glu Gly Gly Arg Asp Ser
1                5                  10                  15
Val Thr Ala Pro Leu Cys Ser Ala Asp Pro Leu Leu Ala Val Pro Pro
            20                  25                  30
Ser Pro Pro Asp Pro Pro Ala Gly Thr Cys Trp Gly Leu Trp Gly Pro
        35                  40                  45
Lys Arg Glu Gly Val Asn Glu Val Val Ala Glu Val Leu Leu Ala Ala
    50                  55                  60
His Glu Gly Val Gly Asp Gln Gly Glu Ala Gly Ala His Pro Val Leu
65                  70                  75                  80
Ser Asp Ala Gly Leu Leu Val Leu Gly Leu Arg Ala Ala Leu Gly Glu
                85                  90                  95
His Gln Ala His Leu Gly Ser Ala Leu Asn Glu His Gln Arg Val Leu
                100                 105                 110
Ala
```

```
<210> 5857
<211> 1751
<212> DNA
<213> Homo sapiens
```

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<400> 5857
gggcggcgcc gagctgaggt ggtgagggac tagctcccgg atgtggagaa gctggggaga
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aggcgtggga ggaagatgga ctcggtggag aaggggggccg ccacctccgt ctccaacccg
120
cggggcgac cgtcccgggg ccggccgccg aagctgcagc gcaactctcg cggcggccag
180
ggccgaggtg gggagaagcc cccgcacctg gcagccctaa ttctggcccg gggaggcagc
240
aaaggcatcc ccctgaagaa cattaagcac ctggcggggg tcccgctcat tggctgggtc
300
ctgcgtgcgg ccctggattc aggggccttc cagagtgtat gggtttcgac agaccatgat
360
gaaattgaga atgtggccaa acaatttggt gcacaagttc atcgaagaag ttctgaagtt
420
tcaaaagaca gctctacctc actagatgcc atcatagaat ttcttaatta tcataatgag
480
gttgacattg taggaaatat tcaagctact tctccatgtt acatcctac tgatcttcaa
540
aaagttgcag aaatgattcg agaagaagc tatgattctg ttttctctgt tgtgagacgc
600
catcagtttc gatggagtga aattcagaaa ggagttcgtg aagtgaccga acctctgaat
660
ttaaatccag ctaaacggcc tcgtcgacaa gactgggatg gagaattata tgaaaatggc
720
tcattttatt ttgctaaaag acatttgata gagatgggtt acttgcaggg tggaaaaatg
780
gcatactacg aaatgcgagc tgaacatagt gtggatatag atgtggatat tgattggcct
840
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attgcagagc aaagagtatt aagatatggc tattttggca aagagaagct taaggaaata
900
aaactttgg tttgcaatat tgatggatgt ctcaccaatg gccacattta tgtatcagga
960
gaccaaaaag aaataatatc ttatgatgta aaagatgcta ttgggataag tttattaaag
1020
aaaagtggta ttgaggtgag gctaatctca gaaagggcct gttcaaagca gacgctgtct
1080
tctttaaaac tggattgcaa aatggaagtc agtgtatcag acaagctagc agttgtagat
1140
gaatggagaa aagaaatggg cctgtgctgg aaagaagtgg catatcttgg aaatgaagtg
1200
tctgatgaag agtgcttgaa gagagtgggc ctaagtggcg ctcctgctga tgcctgttct
1260
actgcccaga aggctgttgg atacatttgc aaatgtaatg gtggccgtgg tgccatccga
1320
gaatttgcag agcacatttg cctactaatg gaaaaggtta ataattcatg ccaaaaatag
1380
aaattagcgt aatattgaga aaaaatgat acagccttct tcagccagtt tgctttttatt
1440
tttgattaag taaattccat gttgtaatgt tacagagagt gtgatttggt ttgtgatata
1500
tatatattgt gctctacttt tctctttacg caagataatt atttagagac tgattacagt
1560
ctttctcaga tttttagtaa atgcaagtaa gaacatcatc aaagttcact ttgtattgta
1620
ccctgtaaaa ctgtgtgttt gtgtgctttc aaagatgttg ggattttatt tatctgggga
1680
cagtgtgtat ggtaagacat gcccttctat taataaaact acatttctca aaaaaaaaa
1740
aaaaaaaaaa a
1751
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<210> 5858
<211> 434
<212> PRT
<213> Homo sapiens

<400> 5858

```
Met Asp Ser Val Glu Lys Gly Ala Ala Thr Ser Val Ser Asn Pro Arg
1               5                   10                  15
Gly Arg Pro Ser Arg Gly Arg Pro Pro Lys Leu Gln Arg Asn Ser Arg
            20                  25                  30
Gly Gly Gln Gly Arg Gly Gly Glu Lys Pro Pro His Leu Ala Ala Leu
        35                  40                  45
Ile Leu Ala Arg Gly Gly Ser Lys Gly Ile Pro Leu Lys Asn Ile Lys
    50                  55                  60
His Leu Ala Gly Val Pro Leu Ile Gly Trp Val Leu Arg Ala Ala Leu
65                  70                  75                  80
Asp Ser Gly Ala Phe Gln Ser Val Trp Val Ser Thr Asp His Asp Glu
                85                  90                  95
Ile Glu Asn Val Ala Lys Gln Phe Gly Ala Gln Val His Arg Arg Ser
                100                 105                 110
Ser Glu Val Ser Lys Asp Ser Ser Thr Ser Leu Asp Ala Ile Ile Glu
```

```
              115                        120                    125
Phe Leu Asn Tyr His Asn Glu Val Asp Ile Val Gly Asn Ile Gln Ala
    130                    135                    140
Thr Ser Pro Cys Leu His Pro Thr Asp Leu Gln Lys Val Ala Glu Met
145                    150                    155                    160
Ile Arg Glu Glu Gly Tyr Asp Ser Val Phe Ser Val Val Arg Arg His
                   165                    170                    175
Gln Phe Arg Trp Ser Glu Ile Gln Lys Gly Val Arg Glu Val Thr Glu
               180                    185                    190
Pro Leu Asn Leu Asn Pro Ala Lys Arg Pro Arg Arg Gln Asp Trp Asp
           195                    200                    205
Gly Glu Leu Tyr Glu Asn Gly Ser Phe Tyr Phe Ala Lys Arg His Leu
       210                    215                    220
Ile Glu Met Gly Tyr Leu Gln Gly Gly Lys Met Ala Tyr Tyr Glu Met
225                    230                    235                    240
Arg Ala Glu His Ser Val Asp Ile Asp Val Asp Ile Asp Trp Pro Ile
                   245                    250                    255
Ala Glu Gln Arg Val Leu Arg Tyr Gly Tyr Phe Gly Lys Glu Lys Leu
               260                    265                    270
Lys Glu Ile Lys Leu Leu Val Cys Asn Ile Asp Gly Cys Leu Thr Asn
           275                    280                    285
Gly His Ile Tyr Val Ser Gly Asp Gln Lys Glu Ile Ile Ser Tyr Asp
       290                    295                    300
Val Lys Asp Ala Ile Gly Ile Ser Leu Leu Lys Lys Ser Gly Ile Glu
305                    310                    315                    320
Val Arg Leu Ile Ser Glu Arg Ala Cys Ser Lys Gln Thr Leu Ser Ser
                   325                    330                    335
Leu Lys Leu Asp Cys Lys Met Glu Val Ser Val Ser Asp Lys Leu Ala
               340                    345                    350
Val Val Asp Glu Trp Arg Lys Glu Met Gly Leu Cys Trp Lys Glu Val
               355                    360                    365
Ala Tyr Leu Gly Asn Glu Val Ser Asp Glu Glu Cys Leu Lys Arg Val
           370                    375                    380
Gly Leu Ser Gly Ala Pro Ala Asp Ala Cys Ser Thr Ala Gln Lys Ala
385                    390                    395                    400
Val Gly Tyr Ile Cys Lys Cys Asn Gly Gly Arg Gly Ala Ile Arg Glu
                   405                    410                    415
Phe Ala Glu His Ile Cys Leu Leu Met Glu Lys Val Asn Asn Ser Cys
               420                    425                    430
Gln Lys
```

<210> 5859
<211> 2267
<212> DNA
<213> Homo sapiens

<400> 5859
tttttttttt tttttgaca gtagacaatg ttgttgttta tttaaaatgt ttactccaag
60
aaatatatat ataaaaaaaa taataagaca attacagcac taaaccaggc accttcgacc
120
aaatcacaac ctcctctttg attccccttc acgctaagcc tctttcaaat tctttttcct
180

```
gagctggaag accagtcaga tgcccgcagg gtcagcgcca agcacattcc caaccgggca
240
actgtgtacc tttctctagg agtgcacgac acccttcccc cacaactcct tgttttaaag
300
gatttaaccc attaggaagc ccatgtttca atctaagcca gaaggagctg cgggacaagg
360
cagtcttcac tttgaaggtc cctttcctgc tccagtccct gggctagggt tctagaagag
420
gctggctgcc acgtttacat gaggccaccg aagatctaag tccagctaag cccagggagg
480
ctcctgcaaa ggctgggacc tcgggtgctg cgtcctcaac cctctcggtg accacggctc
540
aaaggagaga cctcaagggt gccaggagca caggtgcctg ggctgcattc caggaaagag
600
acctgtccag ggaaacggat caggctgtcg catggaagct tacgtcagag atggtggttt
660
tggggtgatt tggacaaatt aggttagttt agcaaagctc tgaagtagca gaagcttctc
720
ccctggacta ctgattgaac acagaacaag agatgcgcgt ggcgtcagac taagtcttag
780
agagatgcag gccagtctcc tcccacaggg ccttgggact ggcaggacag acactgctac
840
atgccctcca agggcaggag tcacggtaag gagcgactgg ggtggaaaat agggaaaaaa
900
gcaacaacaa ctacatcatt tttggcattt taacatggag acagtgacaa gtggtaacaa
960
agcaaaagaa aaaaaaact tgaagagacc aatatttaac tttcccatcc acccaagtct
1020
cacacttaag ttctagtccc atctccccca taagcaccac tgaactaaat atctatttta
1080
aagcacccaa accagtccag accctctgga aaccaagagc cccagccaca gctgtcgcct
1140
ctcttgggtc caggcgagag gagggttccg ggaaaggcac ctcataactc actcagcgca
1200
gcacacacgg cggcgagctc gggcacttga cggggacacg ggtggcagtc acggcatccg
1260
tgctgacatg tgaggaaggg gactctttgg taatcccaac tatttggtac tagagccaag
1320
caaacgtgac taaagggagc tgggtcagca gaacggtacc ccgagtctca gcaacaggat
1380
ggcccgcacg aggcaggatc caggcggggg ggagaaaaag agaccaaagc acaaggcgat
1440
cgaggctggc acagaaaggg ctgatccttc ttgcaaggac tggagaatgc acttgactgc
1500
tggctggtcc atctcttaat tggcgagtgc gcgtgacaag gctcagccct ggctccacag
1560
ggagccacca agctgactca actgatacaa atgttcccac ctctgcccca cccccaagtc
1620
cccatggttc cacaatcacc tgattttcat ttggacctct ttaacagcta aagtagatat
1680
aaatggctaa acacagatcc ccaatccccc accagggggg acacggccga ttctataatg
1740
tcgcagccag aaggctgtgg gcgtacaggc agccaagggg agaaacagaa ccgacaccgg
1800
```

cctaggccca tctgcaagaa aaagcggaga aggagtgacc cggatgcttc cgaagcacgc
1860
gagcgtgatt ttggatggag gcgggccggt gactgcctag ctgctgccgg ttcctgtaag
1920
ggacattttt tctgagtaaa tggcgattcc tcttccatgt ggcatctgct tggatcacga
1980
tgctaattgt aactggaaag gggtgttttg gggagtgtat tcaggagagg aagaaagaaa
2040
aaacttaaaa aaaaaaaaa aacctagatt gctcaaagtt tctgcctctt ttgtaggaat
2100
ggtaaatcaa ctatgagcaa gtattttaat tcaacattaa gggaaaaaaa aggactttgg
2160
aaagcataca gaaaaaaagg tagttaacgt tggatcatgt gtaaaacgga acctcaggga
2220
gtctaaacaa aaatgcacct tcggtcaact tttgcttttt taaattt
2267

<210> 5860
<211> 96
<212> PRT
<213> Homo sapiens

<400> 5860
Met Glu Glu Glu Ser Pro Phe Thr Gln Lys Lys Cys Pro Leu Gln Glu
1   5   10   15
Pro Ala Ala Ala Arg Gln Ser Pro Ala Arg Leu His Pro Lys Ser Arg
            20   25   30
Ser Arg Ala Ser Glu Ala Ser Gly Ser Leu Leu Leu Arg Phe Phe Leu
        35   40   45
Gln Met Gly Leu Gly Arg Cys Arg Phe Cys Phe Ser Pro Trp Leu Pro
    50   55   60
Val Arg Pro Gln Pro Ser Gly Cys Asp Ile Ile Glu Ser Ala Val Ser
65   70   75   80
Pro Leu Val Gly Asp Trp Gly Ser Val Phe Ser His Leu Tyr Leu Leu
                85   90   95

<210> 5861
<211> 1951
<212> DNA
<213> Homo sapiens

<400> 5861
ncaattgcag ctttctatgg cggcaagtcc attctcatca cggggggccac aggctttctg
60
ggcaaagtgc tgatggagaa gctgtttcgc accagcccag acctgaaagt catttacatc
120
cttgtgaggc ccaaggctgg ccagacactg cagcagaggg ttttccagat cctagacagt
180
aagctatttg agaaagtcaa agaagtttgt ccaaatgtgc atgagaagat cagagctatt
240
tatgcagatc tcaatcagaa tgactttgcc atcagcaaag aggacatgca ggagcttctc
300
tcctgtacaa acataatatt tcactgtgca gccactgtac gctttgacga cactctcaga
360

```
catgctgtgc aacttaacgt cactgccacc cggcagctct tgcttatggc tagtcagatg
420
ccaaagctgg aagcctttat acatatctct actgcctatt caaattgtaa cctgaagcac
480
atcgatgaag ttatctatcc gtgccctgtg gagccaaaaa aaaaaatcat tgattccctt
540
gagtggttag acgatgctat tattgacgag attacaccca agctgatcag agattggccc
600
aatatttata cctacaccaa ggccttggga gaaatggtgg tgcagcaaga gagcaggaac
660
ctgaacattg ccatcataag gccctccatt gtgggagcaa cttggcagga gcctttccca
720
ggttgggttg ataatataaa tggacctaat ggaatcatta ttgcgactgg gaaagggttt
780
cttcgggcca taaaagctac tccaatggct gtggcagacg taattccagt tgatacagtc
840
gtcaatctca tgctagctgt aggatggtat actgcagttc acagacctaa gtcaacatta
900
gtctaccaca ttacatctgg taacatgaat ccctgcaatt ggcacaaaat gggagtccaa
960
gtcttggcaa cctttgaaaa aatcccattt gagagacctt tcaggaggcc aaatgctaat
1020
tttaccagca acagcttcac atcacagtac tggaatgcgg tcagccaccg ggcccctgcc
1080
attatctatg actgctatct gcggctcact ggaaggaagc ccaggatgac aaagctcatg
1140
aatcggcttt taagaactgt ttccatgttg gagtatttca tcaaccggag ttgggaatgg
1200
agcacgtaca atacagaaat gctgatgtct gagctgagtc ctgaagacca gagagtattc
1260
aactttgacg tgcgccagtt gaactggttg gaatacattg aaaattatgt tttgggagtt
1320
aaaaaatact tattgaaaga ggatatggct gggatcccaa aagcaaagca acgcttaaaa
1380
aggctccgaa atattcacta cctctttaat actgccctct tccttatcgc ctggcgcctt
1440
ctcattgcaa gatctcagat ggctcggaat gtctggttct tcattgtaag cttctgttat
1500
aaattcctct cctactttag agcatccagc acgctcaaag tttaagagca tttagccatc
1560
gcctttatc tggaacctct cagatacctc taaaacagca aactgtgatt ctcaagatta
1620
gaaagtaaca aggaatatgc ccaaactgtc aaatgtcacc tgttatgtat tcgtccctat
1680
tccttaacta tgtattttta tttcagtgag agaaggaaag ttgtaaacta gcccatagtc
1740
acctatattt tagggaaaaa aatccaaatt gtttcctaac attctatttt atgcccttgc
1800
gtattaaacg tgaaagtact cccacttttc tatatttagt ttttcctttc tctctgagat
1860
gattcattta aactcagtaa atatggaaag atgcatggca gaagctgaaa tgagctcaag
1920
cagtactaac cttggaacca ttctgggtac c
1951
```

```
<210> 5862
<211> 514
<212> PRT
<213> Homo sapiens

<400> 5862
Xaa Ile Ala Ala Phe Tyr Gly Gly Lys Ser Ile Leu Ile Thr Gly Ala
 1               5                  10                 15
Thr Gly Phe Leu Gly Lys Val Leu Met Glu Lys Leu Phe Arg Thr Ser
            20                  25                 30
Pro Asp Leu Lys Val Ile Tyr Ile Leu Val Arg Pro Lys Ala Gly Gln
        35                  40                 45
Thr Leu Gln Gln Arg Val Phe Gln Ile Leu Asp Ser Lys Leu Phe Glu
    50                  55                 60
Lys Val Lys Glu Val Cys Pro Asn Val His Glu Lys Ile Arg Ala Ile
65                  70                  75                 80
Tyr Ala Asp Leu Asn Gln Asn Asp Phe Ala Ile Ser Lys Glu Asp Met
                85                  90                 95
Gln Glu Leu Leu Ser Cys Thr Asn Ile Ile Phe His Cys Ala Ala Thr
            100                 105                110
Val Arg Phe Asp Asp Thr Leu Arg His Ala Val Gln Leu Asn Val Thr
        115                 120                125
Ala Thr Arg Gln Leu Leu Leu Met Ala Ser Gln Met Pro Lys Leu Glu
    130                 135                 140
Ala Phe Ile His Ile Ser Thr Ala Tyr Ser Asn Cys Asn Leu Lys His
145                 150                 155                160
Ile Asp Glu Val Ile Tyr Pro Cys Pro Val Glu Pro Lys Lys Lys Ile
                165                 170                175
Ile Asp Ser Leu Glu Trp Leu Asp Asp Ala Ile Ile Asp Glu Ile Thr
            180                 185                190
Pro Lys Leu Ile Arg Asp Trp Pro Asn Ile Tyr Thr Tyr Thr Lys Ala
        195                 200                205
Leu Gly Glu Met Val Val Gln Gln Glu Ser Arg Asn Leu Asn Ile Ala
    210                 215                 220
Ile Ile Arg Pro Ser Ile Val Gly Ala Thr Trp Gln Glu Pro Phe Pro
225                 230                 235                240
Gly Trp Val Asp Asn Ile Asn Gly Pro Asn Gly Ile Ile Ile Ala Thr
                245                 250                255
Gly Lys Gly Phe Leu Arg Ala Ile Lys Ala Thr Pro Met Ala Val Ala
            260                 265                270
Asp Val Ile Pro Val Asp Thr Val Val Asn Leu Met Leu Ala Val Gly
        275                 280                285
Trp Tyr Thr Ala Val His Arg Pro Lys Ser Thr Leu Val Tyr His Ile
    290                 295                 300
Thr Ser Gly Asn Met Asn Pro Cys Asn Trp His Lys Met Gly Val Gln
305                 310                 315                320
Val Leu Ala Thr Phe Glu Lys Ile Pro Phe Glu Arg Pro Phe Arg Arg
                325                 330                335
Pro Asn Ala Asn Phe Thr Ser Asn Ser Phe Thr Ser Gln Tyr Trp Asn
            340                 345                350
Ala Val Ser His Arg Ala Pro Ala Ile Ile Tyr Asp Cys Tyr Leu Arg
        355                 360                365
Leu Thr Gly Arg Lys Pro Arg Met Thr Lys Leu Met Asn Arg Leu Leu
```

```
      370                      375                      380
Arg Thr Val Ser Met Leu Glu Tyr Phe Ile Asn Arg Ser Trp Glu Trp
385                      390                      395                  400
Ser Thr Tyr Asn Thr Glu Met Leu Met Ser Glu Leu Ser Pro Glu Asp
                    405                      410                  415
Gln Arg Val Phe Asn Phe Asp Val Arg Gln Leu Asn Trp Leu Glu Tyr
                420                      425                  430
Ile Glu Asn Tyr Val Leu Gly Val Lys Lys Tyr Leu Leu Lys Glu Asp
            435                      440                  445
Met Ala Gly Ile Pro Lys Ala Lys Gln Arg Leu Lys Arg Leu Arg Asn
        450                      455                  460
Ile His Tyr Leu Phe Asn Thr Ala Leu Phe Leu Ile Ala Trp Arg Leu
465                      470                      475                  480
Leu Ile Ala Arg Ser Gln Met Ala Arg Asn Val Trp Phe Phe Ile Val
                    485                      490                  495
Ser Phe Cys Tyr Lys Phe Leu Ser Tyr Phe Arg Ala Ser Ser Thr Leu
                500                      505                  510
Lys Val
```

```
<210> 5863
<211> 438
<212> DNA
<213> Homo sapiens

<400> 5863
acgcgtaggt gtgatcttgc tgtaataatg tcccctggca ggtaagattg ctgcagccaa
60
ggggtgttag aggaagatcc ttaaatactc ttcttggaac agaatttggg tctctaagca
120
agaagtgcca gtcttaacat tcactgtttg tgactgattt atagaaaaag gggctggatt
180
ctggtagccg ggggagccca gggtgaacac tgaggttcta ccctgttcta gtggttgctt
240
tgattgatac tcagccatga aagggacata gctcagatac tgacaaaaca gctttgtatt
300
tgagtgtgtt tgtccaactg gcaaggaaca gtctggggac aaacagtgcc ttatttggag
360
ttgcttattc ttctcccca tggagtgacc tcagataacc tttcccagct tggaaagacc
420
tgaatcagat tttgtaca
438
```

```
<210> 5864
<211> 104
<212> PRT
<213> Homo sapiens

<400> 5864
Met Gly Glu Lys Asn Lys Gln Leu Gln Ile Arg His Cys Leu Ser Pro
1               5                  10                  15
Asp Cys Ser Leu Pro Val Gly Gln Thr His Ser Asn Thr Lys Leu Phe
            20                  25                  30
Cys Gln Tyr Leu Ser Tyr Val Pro Phe Met Ala Glu Tyr Gln Ser Lys
```

5032

```
            35                    40                    45
   Gln Pro Leu Glu Gln Gly Arg Thr Ser Val Phe Thr Leu Gly Ser Pro
       50                    55                    60
   Gly Tyr Gln Asn Pro Ala Pro Phe Ser Ile Asn Gln Ser Gln Thr Val
   65                    70                    75                    80
   Asn Val Lys Thr Gly Thr Ser Cys Leu Glu Thr Gln Ile Leu Phe Gln
                     85                    90                    95
   Glu Glu Tyr Leu Arg Ile Phe Leu
                    100
```

<210> 5865
<211> 1229
<212> DNA
<213> Homo sapiens

<400> 5865

```
nntccggaaa caggtgtggc ccggggcata gacttccacc atgtgtctgc tgtgctcaac
60
tttgatcttc ccccaacccc tgaggcctac atccatcgag ctggcaggac agcacgcgct
120
aacaacccag gcatagtctt aacctttgtg cttcccacgg agcagttcca cttaggcaag
180
attgaggagc ttctcgtgga gagaacaggg gccccattct gctcccctac cagttccgga
240
tggaggagat cgagggcttc cgctatcgct gcaggtgtcc accccaggga tgccatgcgc
300
tcagtgacta agcaggccat cgggaggca agattgaagg agatcaagga agagcttctg
360
cattctgaga agcttaagac atactttgaa gacaacccta gggacctcca gctgctgcgg
420
catgacctac ctttgcaccc cgcagtggtg aagccccacc tgggccatgt tcctgactac
480
ctggttcctc ctgctctccg tggcctggta cgccctcaca agaagcggaa gaagctgtct
540
tcctcttgta ggaaggccaa gagagcaaag tcccagaacc cactgcgcag cttcaagcac
600
aaaggaaaga aattcagacc cacagccaag ccctcctgag gttgttgggc ctctctggag
660
ctgagcacat tgtggagcac aggcttacac ccttcgtgga caggcgaggc tctggtgctt
720
actgcacagc ctgaacagac agttctgggg ccggcagtgc tgggcccttt agctccttgg
780
cacttccaag ctggcatctt gccccttgac aacagaataa aaattttagc tgccccagtt
840
tgtgcctcca gcatatgaaa aggactattt gaatccccaa aacatcagga gtcgggaaac
900
ttcggaagac agctgtgcct ggctctgtgg ctgcatgcag tgcttcactt ggccagcaga
960
ggtcagctgt gccgagctgc cccagccatg agaagagaag cctgcccttg ctggcaggtg
1020
gctatggccg gcccagagcc ttcctgccca gctcctgcag ccctgctgcc tgggatcagg
1080
ctgggagatg ggccttcctg accgccagcc ttcctctccc cgagcacacg cacatgtaga
1140
```

```
ttcgggggga agctgcctgc tcttccttag aggagccggg gcagctatct gctggtccct
1200
ttctgaacaa ctgttgatgt gtgaaaaaa
1229
```

<210> 5866
<211> 212
<212> PRT
<213> Homo sapiens

<400> 5866

```
Xaa Pro Glu Thr Gly Val Ala Arg Gly Ile Asp Phe His His Val Ser
1               5                   10                  15
Ala Val Leu Asn Phe Asp Leu Pro Pro Thr Pro Glu Ala Tyr Ile His
            20                  25                  30
Arg Ala Gly Arg Thr Ala Arg Ala Asn Asn Pro Gly Ile Val Leu Thr
            35                  40                  45
Phe Val Leu Pro Thr Glu Gln Phe His Leu Gly Lys Ile Glu Glu Leu
    50                  55                  60
Leu Val Glu Arg Thr Gly Ala Pro Phe Cys Ser Pro Thr Ser Ser Gly
65                  70                  75                  80
Trp Arg Arg Ser Arg Ala Ser Ala Ile Ala Ala Gly Val His Pro Gln
            85                  90                  95
Asp Ala Met Arg Ser Val Thr Lys Gln Ala Ile Arg Glu Ala Arg Leu
            100                 105                 110
Lys Glu Ile Lys Glu Glu Leu Leu His Ser Glu Lys Leu Lys Thr Tyr
            115                 120                 125
Phe Glu Asp Asn Pro Arg Asp Leu Gln Leu Leu Arg His Asp Leu Pro
            130                 135                 140
Leu His Pro Ala Val Val Lys Pro His Leu Gly His Val Pro Asp Tyr
145                 150                 155                 160
Leu Val Pro Pro Ala Leu Arg Gly Leu Val Arg Pro His Lys Lys Arg
                165                 170                 175
Lys Lys Leu Ser Ser Ser Cys Arg Lys Ala Lys Arg Ala Lys Ser Gln
            180                 185                 190
Asn Pro Leu Arg Ser Phe Lys His Lys Gly Lys Lys Phe Arg Pro Thr
            195                 200                 205
Ala Lys Pro Ser
        210
```

<210> 5867
<211> 1882
<212> DNA
<213> Homo sapiens

<400> 5867

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tcctatcgtg gtaccagaga tcttcctgcc atctgaggat gagtgtgggg acgtcctcgt
60
catgagaaag aactcatccc catcctccat taccacttat gagacctgcc agacctacga
120
gcgtcccatt gccttcactg cccgttccag gaagctctgg atcaacttca agacaagcga
180
ggccaacagc gcccgtggct tccagattcc ctatgttacc tatgatgagg actatgagca
240
```

```
gctggtagaa gacattgtgc gagatggccg gctctatgcc tctgaaaacc accaggagat
300
tttaaaggac aagaagctca tcaaggcctt ctttgaggtg ctagcccacc cccagaacta
360
cttcaagtac acagagaaac acaaggagat gctgccaaaa tccttcatca agctgctccg
420
ctccaaagtt tccagcttcc tgaggcccta caaatagtaa ccctaggctc agagacccaa
480
tttttttaagc ccccagactc cttagccctc agagccggca gcccctacc ctcagacaag
540
gaactctctc ctctcttttt ggagggaaaa aaaaatatca ctacacaaac caggcactct
600
cccttttctgt ctttctagtt tcctttcctt gtctctctct gcctgcctct ctactgttcc
660
cccttttcta acacactacc tagaaaagcc attcagtact ggctctagtc cccgtgagat
720
gtaaagaaac agtacagccc cttccactgc ccattttacc agctcacatt cccgacccca
780
tcagcttgga agggtgctag aggcccatca aggaagtggg tctggtggga aacggggagg
840
ggaaagaagg gcttctgcca ttatagggtt gtgccttgct agtcaggggc caaaatgtcc
900
cctggctctg ctccctaggg tgattctaac agcccagggt cctgccaaag aagcctttga
960
tttacaggct taatgccagc accagtcctc tggggcacat ggtttgagct ctggacttcc
1020
cacatggcca gctttcttgt ctatacagat cctctctttc tttccctacg tctgcctggg
1080
gtctactcca taagggttta caaatggccc acaacactga gttagtggac accggctaaa
1140
tgaggaagag cagcaggcat tgtcatggtg aatgccccgc tgtagctccc tgagagaaag
1200
actgtaactc tgcaggacag aaacaaggtt ttaaagcatt gccaaaaaaa agaaaacaga
1260
aagaaaaaat gtatcatcta aaggtctaga cacagaacaa ttggaagtca acttcaaaca
1320
ctaatccctt ttcttgtctt ccctggccca gccacctcct cagccccatg tgatgctccc
1380
tggggggagcc ctactcccct tgctacatgt tgtccttaaa catggttatt gacctgaagc
1440
cagcctaggc cttgccctac agttgttttt cccttgtagc cccagctggc ttgtgggctt
1500
caccaaagag gaccccactc tgaagccagc ctggagccac ctacctctgg cctcaggctg
1560
tgggcagcaa aaggaatgtg tgtgcacttg gcgagcctcc tgcccaccct gtccacacct
1620
aataagtgca atcattttga gtctttctat gttgtctaga cggaggggtt tttgttttct
1680
gggtttgttt tttgtttttg tttcttcttc ctctattagc aaaaccctat ttatagctgc
1740
ccaagagaaa agagtgtatg tttggagtgg aagaaaatcg gttttgaatc tcatgaacct
1800
tgagtgctgg agcatctgat ctgtctctat gccaccaccg gccacctaga gcccttggct
1860
```

```
gtggtaatca catgggtaat tg
1882
```

```
<210> 5868
<211> 131
<212> PRT
<213> Homo sapiens
```

```
<400> 5868
Met Arg Lys Asn Ser Ser Pro Ser Ser Ile Thr Thr Tyr Glu Thr Cys
1               5               10              15
Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ala Arg Ser Arg Lys Leu
            20              25              30
Trp Ile Asn Phe Lys Thr Ser Glu Ala Asn Ser Ala Arg Gly Phe Gln
        35              40              45
Ile Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Glu Gln Leu Val Glu Asp
        50              55              60
Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His Gln Glu Ile
65              70              75              80
Leu Lys Asp Lys Lys Leu Ile Lys Ala Phe Phe Glu Val Leu Ala His
                85              90              95
Pro Gln Asn Tyr Phe Lys Tyr Thr Glu Lys His Lys Glu Met Leu Pro
            100             105             110
Lys Ser Phe Ile Lys Leu Leu Arg Ser Lys Val Ser Ser Phe Leu Arg
        115             120             125
Pro Tyr Lys
        130
```

```
<210> 5869
<211> 910
<212> DNA
<213> Homo sapiens
```

```
<400> 5869
tgatcagtac aaagcacaag aatttcccct catctgctat aggaggtttc tctcctccct
60
tctaggggct cacaggccac aggctaacct ggtggctcct ggcagccatc ttgggactga
120
aagaaactca ccctgacgaa gctcgcccat tagtgactgc aatttctgtt tttagagttt
180
tggtattccg tgatattcaa atactaaaat acatgagttt ttattggtgt aattccatca
240
ttatttcatt atttcaacat ttaaaaaatt gcaagtctat gactcaatga ttccacagaa
300
aagacaaacg gatgggttgg cttcaagtct agactcgcct tcagagtctg tcttctccag
360
agaatcatcg cagatcacaa caggcagcct tctaattatg catcacgaag cttctaccca
420
cagggtaatt cccactctgg ttcaaacagg tttgcatggt cgtcacatcc tggggagaca
480
cgtatttggg tctgcggcaa acctttttag ttgtgccata gaccaggttt ttccgaacga
540
aggctgtctt ccatattcct gccaagaacc aaactcatca ctccagtacc aaatccagtc
600
```

agtggtgagg atgaagtgtg gaggtttggt gacagaggag gccgtggaga ggcggcgagc
660
ctgggtagca ccgtaagtca tggcgttaaa gttcagacaa tgagagtgaa aggtactggc
720
tgactcagag cacaggatcc tttctatttt gggattgcaa tatgcctctt caataagttc
780
catgttgtcc aaatcctccc atttgcctct atccaagaat tgccatcgat acggcaaatg
840
gaaatgaact ctatggcact tatcttgaaa gctacaactt ttccggatat ggtacaaaca
900
gatctgatca
910

<210> 5870
<211> 129
<212> PRT
<213> Homo sapiens

<400> 5870
Met Ile Pro Gln Lys Arg Gln Thr Asp Gly Leu Ala Ser Ser Leu Asp
1   5   10   15
Ser Pro Ser Glu Ser Val Phe Ser Arg Glu Ser Ser Gln Ile Thr Thr
                20   25   30
Gly Ser Leu Leu Ile Met His His Glu Ala Ser Thr His Arg Val Ile
            35   40   45
Pro Thr Leu Val Gln Thr Gly Leu His Gly Arg His Ile Leu Gly Arg
        50   55   60
His Val Phe Gly Ser Ala Ala Asn Leu Phe Ser Cys Ala Ile Asp Gln
65   70   75   80
Val Phe Pro Asn Glu Gly Cys Leu Pro Tyr Ser Cys Gln Glu Pro Asn
                85   90   95
Ser Ser Leu Gln Tyr Gln Ile Gln Ser Val Val Arg Met Lys Cys Gly
                100   105   110
Gly Leu Val Thr Glu Glu Ala Val Glu Arg Arg Arg Ala Trp Val Ala
            115   120   125
Pro

<210> 5871
<211> 2217
<212> DNA
<213> Homo sapiens

<400> 5871
ntanatttct ctctaaacac tgcctnagct gcatcccata gattgtggta cattttgtct
60
ttgttctcat tggtttcaaa taacttgttt atttctgtct taattgcatt gtttacccag
120
tagtcattca ggagcaagtt gttcagtttc catatagatt ctgtgtgttt tagtcttgct
180
taaattattt ctactacttc tttgcacccc tttgctagtt ttctcagtgc cgtagggttt
240
attaaataat aattggactc tagtaatttt ttttaatgag agagagggaa actatatttg
300

aaattggatt gggacattta ttttacttaa acagaagttt gcttatgaca cataatctag
360
atgggatata tcttatctat agtgtatcca cctgctgtaa gtagatactg tatttgtata
420
gccattattt tgctgtaagt actttatcat tttaattaaa ttgattaaga ggaaaaaaaa
480
agaatggaat tctctttgat gcaacttttt ccccccagac cagaatccgt agaagctagc
540
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| Asn | Pro | Thr | Pro | Pro | Pro | Ser | Leu | Asp | Met | Phe | Ala | Glu | Glu | Leu | Ala |
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| Glu | Glu | Glu | Leu | Glu | Thr | Pro | Thr | Pro | Thr | Gln | Arg | Gly | Glu | Ala | Glu |
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| Ser | Arg | Gly | Asp | Gly | Leu | Val | Asp | Val | Met | Trp | Glu | Tyr | Lys | Trp | Glu |
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| Asn | Thr | Gly | Asp | Ala | Glu | Leu | Tyr | Gly | Pro | Phe | Thr | Ser | Ala | Gln | Met |
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gcagccacca ccagtttgcg gcgagcaaat caggaaaaaa aactgggtga atactccaag
3900
aaggcggcta tgaaacccaa acctttgtca gtattaaagt cacttgaaga aaaatatgtg
3960
gctgttatga agaaattaca gtttgatacg tttgaaatgg tttctgaaga tgaagatggg
4020
aaattgggat ttaaagtaaa ttaccactac atgtctcagg tgaaaaatgc taatgatgcg
4080
aacagtgctg ccagagctcg ccgccttgcc caggaagctg tgacactttc aacctcactg
4140
cctctgtctt catcctctag tgtgtttgta cgctgtgatg aggagcgact tgatatcatg
4200
aaggttctaa taactggtcc agcggacacc ccttatgcaa atggctgctt tgagtttgat
4260
gtgtattttc ctcaagatta tcccagttca ccccctcttg tgaatctaga gacaactggt
4320
ggtcatagcg tgcgattcaa tccaaacctt tataatgatg gcaaggtttg tttaagcatc
4380
ttaaacacgt ggcatggaag accagaagag aagtggaatc ctcagacctc aagctttttg
4440
caagtgttgg tgtctgtcca gtcccttata ttagtagctg agccttattt taatgaaccg
4500
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4560
aacattcgac aagcaacagt taagtgggca atgctagaac aaatcagaaa cccttcacca
4620
tgttttaaag aggtaataca caaacatttt tacttgaaaa gagttgagat aatggcccaa
4680
tgtgaggagt ggattgcgga tatccagcag tacagcagtg ataagcgggt aggcaggact
4740
atgtctcacc atgcagcagc tctcaagcgt cacactgctc agctccgcga agagttgctg
4800
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5046

aaacttccct gccctgaagg cttggatcct gacactgacg atgccccaga ggtgtgcaga
4860

gccacaacag gtgctgagga gactctaatg catgatcagg ttaaacccag cagcagcaaa
4920

gaactcccca gtgacttcca gttatgagct gcattgatgt ggacttcata gacacaaagg
4980

cttcgaagca caagccaaat atgtcaatat ttgtatgtaa gaaactaatt atgtaatagg
5040

taatgaaact gaaactatac tatgccctta aggagatcca gtttaattca aggtgatctt
5100

ttatttacct gtacaggagt gtaaactttt ttgtgctttt attttttcaat tgtgagaacc
5160

actgattggt atgttcaaca aatttgtgta tacaaagaaa tggataaatc actgctatat
5220

aagggaaact accttaggaa agaatgttta ctgaatgttt attttatttt tttttttttt
5280

tactatagag tgaggggttg ttaacaaaga atatatattg gtcattctta caactactat
5340

ttaaagtcag caacttttca ctgaatttga tagattttat gtttggccat atcttcatgc
5400

tcacatttga tttctgaaga cctcctacat acacttcaat aaaagttaaa tggacatact
5460

ccctctttttt tgatttactg gtacattttt aaaataataa atctgccata aaatgcatta
5520

tatctggaga cttgcacttg tatggatgaa tttattacat tcaacatatt taattttatg
5580

ccttctaatt ctaagatgca gaaaaaaata aatgaacatg attttattct atgccaacat
5640

ttgggcctct gaatgtatct gttatttgaa tttaagtatt tgaaaaggaa tggtcaattt
5700

gaaagtcatt ctaaactgat ttttttttttc taaagggctc cttttttcct ggactatgtg
5760

gtttttatgac taaagtcaca tgtatgtatt aaacattgag gctctgtaga ggagagagga
5820

tgtacctctc tggtgctgtt acagtacatt ctgtacctgc catacaggct cattttcatg
5880

caaattcttc ctagagccaa ataaataaag acttaggtga aaaaaaaaaa aaa
5933

<210> 5876
<211> 1648
<212> PRT
<213> Homo sapiens

<400> 5876
Leu Thr Ile His Leu Pro Ala Ala Val Leu Leu Lys Glu Ile His Ile
1   5   10   15
Gln Pro His Leu Xaa Phe Leu Ala Thr Cys Pro Ser Ser Val Ser Val
            20   25   30
Glu Val Ser Ala Asp Gly Val Asn Met Leu Pro Leu Ser Thr Pro Val
        35   40   45
Val Thr Ser Gly Leu Thr Tyr Ile Lys Ile Gln Leu Val Lys Ala Glu
    50   55   60
Val Ala Ser Ala Val Cys Leu Arg Leu His Arg Pro Arg Asp Ala Ser

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65                    70                    75                    80
Thr Leu Gly Leu Ser Gln Ile Lys Leu Leu Gly Leu Thr Ala Phe Gly
                85                    90                    95
Thr Thr Ser Ser Ala Thr Val Asn Asn Pro Phe Leu Pro Ser Glu Asp
            100                   105                   110
Gln Val Ser Lys Thr Ser Ile Gly Trp Leu Arg Leu Leu His His Cys
            115                   120                   125
Leu Thr His Ile Ser Asp Leu Glu Gly Met Met Ala Ser Ala Ala Ala
        130                   135                   140
Pro Thr Ala Asn Leu Leu Gln Thr Cys Ala Ala Leu Leu Met Ser Pro
145                   150                   155                   160
Tyr Cys Gly Met His Ser Pro Asn Ile Glu Val Val Leu Val Lys Ile
                165                   170                   175
Gly Leu Gln Ser Thr Arg Ile Gly Leu Lys Leu Ile Asp Ile Leu Leu
                180                   185                   190
Arg Asn Cys Ala Ala Ser Gly Ser Asp Pro Thr Asp Leu Asn Ser Pro
            195                   200                   205
Leu Leu Phe Gly Arg Leu Asn Gly Leu Ser Ser Asp Ser Thr Ile Asp
        210                   215                   220
Ile Leu Tyr Gln Leu Gly Thr Thr Gln Asp Pro Gly Thr Lys Asp Arg
225                   230                   235                   240
Ile Gln Ala Leu Leu Lys Trp Val Ser Asp Ser Ala Arg Val Ala Ala
                245                   250                   255
Met Lys Arg Ser Gly Arg Met Asn Tyr Met Cys Pro Asn Ser Ser Thr
            260                   265                   270
Val Glu Tyr Gly Leu Leu Met Pro Ser Pro Ser His Leu His Cys Val
            275                   280                   285
Ala Ala Ile Leu Trp His Ser Tyr Glu Leu Leu Val Glu Tyr Asp Leu
        290                   295                   300
Pro Ala Leu Leu Asp Gln Glu Leu Phe Glu Leu Leu Phe Asn Trp Ser
305                   310                   315                   320
Met Ser Leu Pro Cys Asn Met Val Leu Lys Lys Ala Val Asp Ser Leu
            325                   330                   335
Leu Cys Ser Met Cys His Val His Pro Asn Tyr Phe Ser Leu Leu Met
            340                   345                   350
Gly Trp Met Gly Ile Thr Pro Pro Pro Val Gln Cys His His Arg Leu
            355                   360                   365
Ser Met Thr Asp Asp Ser Lys Lys Gln Asp Leu Ser Ser Ser Leu Thr
        370                   375                   380
Asp Asp Ser Lys Asn Ala Gln Ala Pro Leu Ala Leu Thr Glu Ser His
385                   390                   395                   400
Leu Ala Thr Leu Ala Ser Ser Ser Gln Ser Pro Glu Ala Ile Lys Gln
            405                   410                   415
Leu Leu Asp Ser Gly Leu Pro Ser Leu Leu Val Arg Ser Leu Ala Ser
        420                   425                   430
Phe Cys Phe Ser His Ile Ser Ser Ser Glu Ser Ile Ala Gln Ser Ile
        435                   440                   445
Asp Ile Ser Gln Asp Lys Leu Arg Arg His His Val Pro Gln Gln Cys
    450                   455                   460
Asn Lys Met Pro Ile Thr Ala Asp Leu Val Ala Pro Ile Leu Arg Phe
465                   470                   475                   480
Leu Thr Glu Val Gly Asn Ser His Ile Met Lys Asp Trp Leu Gly Gly
            485                   490                   495
Ser Glu Val Asn Pro Leu Trp Thr Ala Leu Leu Phe Leu Leu Cys His
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              500                      505                      510
Ser Gly Ser Thr Ser Gly Ser His Asn Leu Gly Ala Gln Gln Thr Ser
          515                      520                      525
Ala Arg Ser Ala Ser Leu Ser Ser Ala Ala Thr Thr Gly Leu Thr Thr
      530                      535                      540
Gln Gln Arg Thr Ala Ile Glu Asn Ala Thr Val Ala Phe Phe Leu Gln
545                      550                      555                      560
Cys Ile Ser Cys His Pro Asn Asn Gln Lys Leu Met Ala Gln Val Leu
              565                      570                      575
Cys Glu Leu Phe Gln Thr Ser Pro Gln Arg Gly Asn Leu Pro Thr Ser
          580                      585                      590
Gly Asn Ile Ser Gly Phe Ile Arg Arg Leu Phe Leu Gln Leu Met Leu
          595                      600                      605
Glu Asp Glu Lys Val Thr Met Phe Leu Gln Ser Pro Cys Pro Leu Tyr
      610                      615                      620
Lys Gly Arg Ile Asn Ala Thr Ser His Val Ile Gln His Pro Met Tyr
625                      630                      635                      640
Gly Ala Gly His Lys Phe Arg Thr Leu His Leu Pro Val Ser Thr Thr
              645                      650                      655
Leu Ser Asp Val Leu Asp Arg Val Ser Asp Thr Pro Ser Ile Thr Ala
          660                      665                      670
Lys Leu Ile Ser Glu Gln Lys Asp Asp Lys Glu Lys Lys Asn His Glu
          675                      680                      685
Glu Lys Glu Lys Val Lys Ala Glu Asn Gly Phe Gln Asp Asn Tyr Ser
      690                      695                      700
Val Val Val Ala Ser Gly Leu Lys Ser Gln Ser Lys Arg Ala Val Ser
705                      710                      715                      720
Ala Thr Pro Pro Arg Pro Pro Ser Arg Arg Gly Arg Thr Ile Pro Asp
              725                      730                      735
Lys Ile Gly Ser Thr Ser Gly Ala Glu Ala Ala Asn Lys Ile Ile Thr
          740                      745                      750
Val Pro Val Phe His Leu Phe His Lys Leu Leu Ala Gly Gln Pro Leu
          755                      760                      765
Pro Ala Glu Met Thr Leu Ala Gln Leu Leu Thr Leu Leu Tyr Asp Arg
      770                      775                      780
Lys Leu Pro Gln Gly Tyr Arg Ser Ile Asp Leu Thr Val Lys Leu Gly
785                      790                      795                      800
Ser Arg Val Ile Thr Asp Pro Ser Leu Ser Lys Thr Asp Ser Tyr Lys
              805                      810                      815
Arg Leu His Pro Glu Lys Asp His Gly Asp Leu Leu Ala Ser Cys Pro
          820                      825                      830
Glu Asp Glu Ala Leu Thr Pro Gly Asp Glu Cys Met Asp Gly Ile Leu
          835                      840                      845
Asp Glu Ser Leu Leu Glu Thr Cys Pro Ile Gln Ser Pro Leu Gln Val
      850                      855                      860
Phe Ala Gly Met Gly Gly Leu Ala Leu Ile Ala Glu Arg Leu Pro Met
865                      870                      875                      880
Leu Tyr Pro Glu Val Ile Gln Gln Val Ser Ala Pro Val Val Thr Ser
              885                      890                      895
Thr Thr Gln Glu Lys Pro Lys Asp Ser Asp Gln Phe Glu Trp Val Thr
          900                      905                      910
Ile Glu Gln Ser Gly Glu Leu Val Tyr Glu Ala Pro Glu Thr Val Ala
          915                      920                      925
Ala Glu Pro Pro Pro Ile Lys Ser Ala Val Gln Thr Met Ser Pro Ile
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                                    5049

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        930                    935                    940
Pro Ala His Ser Leu Ala Ala Phe Gly Leu Phe Leu Arg Leu Pro Gly
945                    950                    955                    960
Tyr Ala Glu Val Leu Leu Lys Glu Arg Lys His Ala Gln Cys Leu Leu
            965                    970                    975
Arg Leu Val Leu Gly Val Thr Asp Asp Gly Glu Gly Ser His Ile Leu
            980                    985                    990
Gln Ser Pro Ser Ala Asn Val Leu Pro Thr Leu Pro Phe His Val Leu
            995                   1000                   1005
Arg Ser Leu Phe Ser Thr Thr Pro Leu Thr Thr Asp Asp Gly Val Leu
        1010                   1015                   1020
Leu Arg Arg Met Ala Leu Glu Ile Gly Ala Leu His Leu Ile Leu Val
1025                   1030                   1035                   1040
Cys Leu Ser Ala Leu Ser His His Ser Pro Arg Val Pro Asn Ser Ser
                1045                   1050                   1055
Val Asn Gln Thr Glu Pro Gln Val Ser Ser Ser His Asn Pro Thr Ser
                1060                   1065                   1070
Thr Glu Glu Gln Gln Leu Tyr Trp Ala Lys Gly Thr Gly Phe Gly Thr
            1075                   1080                   1085
Gly Ser Thr Ala Ser Gly Trp Asp Val Glu Gln Ala Leu Thr Lys Gln
        1090                   1095                   1100
Arg Leu Glu Glu Glu His Val Thr Cys Leu Leu Gln Val Leu Ala Ser
1105                   1110                   1115                   1120
Tyr Ile Asn Pro Val Ser Ser Ala Val Asn Gly Glu Ala Gln Ser Ser
                1125                   1130                   1135
His Glu Thr Arg Gly Gln Asn Ser Asn Ala Leu Pro Ser Val Leu Leu
            1140                   1145                   1150
Glu Leu Leu Ser Gln Ser Cys Leu Ile Pro Ala Met Ser Ser Tyr Leu
            1155                   1160                   1165
Arg Asn Asp Ser Val Leu Asp Met Ala Arg His Val Pro Leu Tyr Arg
        1170                   1175                   1180
Ala Leu Leu Glu Leu Leu Arg Ala Ile Ala Ser Cys Ala Ala Met Val
1185                   1190                   1195                   1200
Pro Leu Leu Leu Pro Leu Ser Thr Glu Asn Gly Glu Glu Glu Glu Glu
                1205                   1210                   1215
Gln Ser Glu Cys Gln Thr Ser Val Gly Thr Leu Leu Ala Lys Met Lys
                1220                   1225                   1230
Thr Cys Val Asp Thr Tyr Thr Asn Arg Leu Arg Ser Lys Arg Glu Asn
                1235                   1240                   1245
Val Lys Thr Gly Val Lys Pro Asp Ala Ser Asp Gln Glu Pro Glu Gly
            1250                   1255                   1260
Leu Thr Leu Leu Val Pro Asp Ile Gln Lys Thr Ala Glu Ile Val Tyr
1265                   1270                   1275                   1280
Ala Ala Thr Thr Ser Leu Arg Arg Ala Asn Gln Glu Lys Lys Leu Gly
                1285                   1290                   1295
Glu Tyr Ser Lys Lys Ala Ala Met Lys Pro Lys Pro Leu Ser Val Leu
                1300                   1305                   1310
Lys Ser Leu Glu Glu Lys Tyr Val Ala Val Met Lys Lys Leu Gln Phe
            1315                   1320                   1325
Asp Thr Phe Glu Met Val Ser Glu Asp Glu Asp Gly Lys Leu Gly Phe
            1330                   1335                   1340
Lys Val Asn Tyr His Tyr Met Ser Gln Val Lys Asn Ala Asn Asp Ala
1345                   1350                   1355                   1360
Asn Ser Ala Ala Arg Ala Arg Arg Leu Ala Gln Glu Ala Val Thr Leu
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                         1365                1370                1375
         Ser Thr Ser Leu Pro Leu Ser Ser Ser Ser Val Phe Val Arg Cys
                1380                1385                1390
         Asp Glu Glu Arg Leu Asp Ile Met Lys Val Leu Ile Thr Gly Pro Ala
               1395                1400                1405
         Asp Thr Pro Tyr Ala Asn Gly Cys Phe Glu Phe Asp Val Tyr Phe Pro
               1410                1415                1420
         Gln Asp Tyr Pro Ser Ser Pro Pro Leu Val Asn Leu Glu Thr Thr Gly
         1425                1430                1435                1440
         Gly His Ser Val Arg Phe Asn Pro Asn Leu Tyr Asn Asp Gly Lys Val
                        1445                1450                1455
         Cys Leu Ser Ile Leu Asn Thr Trp His Gly Arg Pro Glu Glu Lys Trp
                1460                1465                1470
         Asn Pro Gln Thr Ser Ser Phe Leu Gln Val Leu Val Ser Val Gln Ser
                   1475                1480                1485
         Leu Ile Leu Val Ala Glu Pro Tyr Phe Asn Glu Pro Gly Tyr Glu Arg
                1490                1495                1500
         Ser Arg Gly Thr Pro Ser Gly Thr Gln Ser Ser Arg Glu Tyr Asp Gly
         1505                1510                1515                1520
         Asn Ile Arg Gln Ala Thr Val Lys Trp Ala Met Leu Glu Gln Ile Arg
                        1525                1530                1535
         Asn Pro Ser Pro Cys Phe Lys Glu Val Ile His Lys His Phe Tyr Leu
                   1540                1545                1550
         Lys Arg Val Glu Ile Met Ala Gln Cys Glu Glu Trp Ile Ala Asp Ile
                   1555                1560                1565
         Gln Gln Tyr Ser Ser Asp Lys Arg Val Gly Arg Thr Met Ser His His
                1570                1575                1580
         Ala Ala Ala Leu Lys Arg His Thr Ala Gln Leu Arg Glu Glu Leu Leu
         1585                1590                1595                1600
         Lys Leu Pro Cys Pro Glu Gly Leu Asp Pro Asp Thr Asp Asp Ala Pro
                        1605                1610                1615
         Glu Val Cys Arg Ala Thr Thr Gly Ala Glu Glu Thr Leu Met His Asp
                   1620                1625                1630
         Gln Val Lys Pro Ser Ser Ser Lys Glu Leu Pro Ser Asp Phe Gln Leu
                   1635                1640                1645
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<210> 5877
<211> 683
<212> DNA
<213> Homo sapiens

<400> 5877
ngcggcggcg cgacgggcgg cggcggcggt tccagcatga aggggagagc tggcctgggg
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ggcagcatga ggtcagtggt gggcttcttg tcccagcggg gcttgcatgg ggaccccctg
120
ctcactcagg actttcagag gagacgcctg cggggctgca gaaacctcta caagaaggac
180
ctcctcggcc acttcggctg tgtcaatgcc attgaattct ccaacaatgg aggccagtgg
240
ctggtctcag gaggagatga ccgccgggtt ctgctatggc acatggaaca agccatccac
300
tccagggtca agcccataca gctgaaagga gagcaccatt ccaacatttt ttgcctggct
360

ttcaacagtg ggaacactaa agtgttctct ggaggcaatg atgagcaagt tatcctccat
420
gatgttgaaa gcagtgagac attggacgtg tttgctcatg aagatgcagt atatggcttg
480
tctgtgagcc cagtgaatga caacattttt gccagttcct cagatgatgg ccgggttctc
540
atttgggaca ttcgggaatc cccccatgga gagcccttct gctgggcaaa ctatccatca
600
gcctttcata gtgtcatgtt taaccctgtg gagcccaggt tgttggcccc agccaattca
660
aaggaaggag tgggactctg gga
683

<210> 5878
<211> 227
<212> PRT
<213> Homo sapiens

<400> 5878
Xaa Gly Gly Ala Thr Gly Gly Gly Gly Ser Ser Met Lys Gly Arg
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Ala Gly Leu Gly Gly Ser Met Arg Ser Val Val Gly Phe Leu Ser Gln
             20   25   30
Arg Gly Leu His Gly Asp Pro Leu Leu Thr Gln Asp Phe Gln Arg Arg
             35   40   45
Arg Leu Arg Gly Cys Arg Asn Leu Tyr Lys Lys Asp Leu Leu Gly His
         50   55   60
Phe Gly Cys Val Asn Ala Ile Glu Phe Ser Asn Asn Gly Gly Gln Trp
65   70   75   80
Leu Val Ser Gly Gly Asp Asp Arg Arg Val Leu Leu Trp His Met Glu
                 85   90   95
Gln Ala Ile His Ser Arg Val Lys Pro Ile Gln Leu Lys Gly Glu His
                100   105   110
His Ser Asn Ile Phe Cys Leu Ala Phe Asn Ser Gly Asn Thr Lys Val
            115   120   125
Phe Ser Gly Gly Asn Asp Glu Gln Val Ile Leu His Asp Val Glu Ser
        130   135   140
Ser Glu Thr Leu Asp Val Phe Ala His Glu Asp Ala Val Tyr Gly Leu
145   150   155   160
Ser Val Ser Pro Val Asn Asp Asn Ile Phe Ala Ser Ser Ser Asp Asp
                165   170   175
Gly Arg Val Leu Ile Trp Asp Ile Arg Glu Ser Pro His Gly Glu Pro
            180   185   190
Phe Cys Trp Ala Asn Tyr Pro Ser Ala Phe His Ser Val Met Phe Asn
        195   200   205
Pro Val Glu Pro Arg Leu Leu Ala Pro Ala Asn Ser Lys Glu Gly Val
    210   215   220
Gly Leu Trp
225

<210> 5879
<211> 1555
<212> DNA
<213> Homo sapiens

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<400> 5879
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taacagtgaa ctggaataat gagggcttca ctggtaaaat gcttctgaat tgactggaaa
120
tccatttggg gtgctgggga acgttattcc cagagaggtg cctcagtgga ggcgctgtgt
180
ctcctacgca acttctgagg gctggagggt gccaagggca gctgctgacc gcctggtgct
240
tcaggagctg ggtgctgggg aagccacatg cactgcggcg tccagaggca gaagcacaac
300
caacaagaac cacgaaggag gcgcctttcc tcctataatg cctgtttggt gccctctact
360
gacaaagctt atcccctttc aaaaaacagc caactgaaaa agctgaattt ggaacataaa
420
gtcaataaat ccataaccag caatactatg gggcctgggg tgcgctggcc tttagtgagt
480
ggagtggggc gaaggatgct gcatgtcctg cagtgggcac agcggccctg cacggggggag
540
aaccatccct gtaaagtgtc agtagtagcc cctgtgtcag tcagggtccc tgcaagaaat
600
ggcagtgcac tcacataagg acagtttgag aagagtctcc tgacaaggtg agtgtggctc
660
tctgcggcta ctaacagcct gagcctttac ctccccaggc ctgaacaggg gcatggaaag
720
ggctgcctga cagggtgaca ggagctgtga cctttagcca agggcagcca ggaataaata
780
ctgggaactc acgctctctc ctgtgattgg ccagcaccac tcccccaccc tgacgttgag
840
tgaagacaaa tggaagccag aagtgtggtg agctaccaga cattccatgc agcccgctga
900
gaagccacgt gagtggggac agggctaaag gctaggcagg gacagggctg gctgtgtccc
960
gaggctgctc ctccggccct gacttcaggc cctcagccca gtcgactccc acaacctcgc
1020
aattgggcag catctcctcc accaatatct gagtgaggcc agggttggac acggcaggga
1080
ggtccgagat gtccagcctg cggaggttcg gaggttatcc aggccctcgt agttgatgtc
1140
acagtcaccg gcatccacag cttcgacagg cacttcacag aaattccaga actcctgaga
1200
gaaatggcca tacttatctg gcctgatcca ctccttgtct cgaaacttga ctgcgcctcc
1260
ctgcttcagg atgaaaaagg cacctgcgcc gtatggacca tgttgcttct ccagccaggt
1320
gtaagatcga tttttctcat gcaccttgta catctccctt tggagcaagt aatccctcag
1380
agcctccaca tcgtagaaat agttggtcag gaactggagt attgtccttt tcttcttctg
1440
actgccctct ggggccactg ccgcacccag gcgatggatg cccctgatac gcccattcca
1500
catggggggcg accaggcgca gggacgccca gggagccgcc atcttgctaa ggttt
1555
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<210> 5880
<211> 185
<212> PRT
<213> Homo sapiens

<400> 5880
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1   5   10   15
Gly Arg Ile Arg Gly Ile His Arg Leu Gly Ala Ala Val Ala Pro Glu
            20   25   30
Gly Ser Gln Lys Lys Lys Arg Thr Ile Leu Gln Phe Leu Thr Asn Tyr
        35   40   45
Phe Tyr Asp Val Glu Ala Leu Arg Asp Tyr Leu Leu Gln Arg Glu Met
    50   55   60
Tyr Lys Val His Glu Lys Asn Arg Ser Tyr Thr Trp Leu Glu Lys Gln
65   70   75   80
His Gly Pro Tyr Gly Ala Gly Ala Phe Phe Ile Leu Lys Gln Gly Gly
            85   90   95
Ala Val Lys Phe Arg Asp Lys Glu Trp Ile Arg Pro Asp Lys Tyr Gly
            100   105   110
His Phe Ser Gln Glu Phe Trp Asn Phe Cys Glu Val Pro Val Glu Ala
        115   120   125
Val Asp Ala Gly Asp Cys Asp Ile Asn Tyr Glu Gly Leu Asp Asn Leu
    130   135   140
Arg Thr Ser Ala Gly Trp Thr Ser Arg Thr Ser Leu Pro Cys Pro Thr
145   150   155   160
Leu Ala Ser Leu Arg Tyr Trp Trp Arg Arg Cys Cys Pro Ile Ala Arg
                165   170   175
Leu Trp Glu Ser Thr Gly Leu Arg Ala
                180   185

<210> 5881
<211> 327
<212> DNA
<213> Homo sapiens

<400> 5881
ngcgcgcccc ggcccgtggc ccgcgagaag acctcgctgg gcagcttgaa gcgcgccagc
60
gtggacgtgg acctgctggc cccgcgcagc cccatggcca aggagaacat ggtgaccttc
120
agccacacgc tgcccagggc cagcgcgccc tcgctggacg accccgcgcg ccgccacatg
180
accatccacg tgccgctgga cgcctcgcgc tccaagcagc tcatcagcga gtggaagcag
240
aagagcctgg agggccgcgg cctggggctg cccgacgacg ccagccccgg gcacctgcgc
300
gcgcccgccg aacccatgcc ggaggan
327

<210> 5882
<211> 109
<212> PRT

<213> Homo sapiens

<400> 5882
Xaa Ala Pro Arg Pro Val Ala Arg Glu Lys Thr Ser Leu Gly Ser Leu
1   5   10   15
Lys Arg Ala Ser Val Asp Val Asp Leu Leu Ala Pro Arg Ser Pro Met
            20   25   30
Ala Lys Glu Asn Met Val Thr Phe Ser His Thr Leu Pro Arg Ala Ser
        35   40   45
Ala Pro Ser Leu Asp Asp Pro Ala Arg Arg His Met Thr Ile His Val
    50   55   60
Pro Leu Asp Ala Ser Arg Ser Lys Gln Leu Ile Ser Glu Trp Lys Gln
65   70   75   80
Lys Ser Leu Glu Gly Arg Gly Leu Gly Leu Pro Asp Asp Ala Ser Pro
                85   90   95
Gly His Leu Arg Ala Pro Ala Glu Pro Met Pro Glu Xaa
                100   105

<210> 5883
<211> 579
<212> DNA
<213> Homo sapiens

<400> 5883
nggtcgacct ctgcttcctt acagcacccc cacctgccag agctgatcct ccctaggccc
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tgcctaacct tgagttggcc cccaatccct ctggctgcag aagtcccctt accccccaatg
120
agaggagggg caggaccaga tcttttgaga gctgagggtt gagggcattg agccaacaca
180
cagatttgtc gcctctgtcc ccgaagacac ctgcaccctc catgcggagc caagatgggg
240
aatggaactg aggaagatta taactttgtc ttcaaggtgg tgctgatcgg cgaatcaggt
300
gtggggaaga ccaatctact ttcccgattc acgcgcaatg agttcagcca cgacagccgc
360
accaccatcg gggttgagtt ctccacccgc actgtgatgt gggcaccgc tgctgtcaag
420
gctcagatct gggacacagc tggtgtttga cctaaccaag caccagacct atgctgtggt
480
ggagcgatgg ctgaaggagc tctatgacca tgctgaagcc acgatcgtcg tcatgctcgt
540
gggtaacaaa agtgacctca gccaggcccg ggaagtgcc
579

<210> 5884
<211> 71
<212> PRT
<213> Homo sapiens

<400> 5884
Met Gly Asn Gly Thr Glu Glu Asp Tyr Asn Phe Val Phe Lys Val Val
1   5   10   15
Leu Ile Gly Glu Ser Gly Val Gly Lys Thr Asn Leu Leu Ser Arg Phe

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                20                    25                    30
     Thr Arg Asn Glu Phe Ser His Asp Ser Arg Thr Thr Ile Gly Val Glu
               35                    40                    45
     Phe Ser Thr Arg Thr Val Met Leu Gly Thr Ala Ala Val Lys Ala Gln
               50                    55                    60
     Ile Trp Asp Thr Ala Gly Val
     65                    70
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<210> 5885
<211> 1905
<212> DNA
<213> Homo sapiens

<400> 5885

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1200
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1440
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1620
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1680
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1740
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1905


<210> 5886
<211> 265
<212> PRT
<213> Homo sapiens

<400> 5886
Met Ala Thr Leu Leu Arg Pro Val Leu Arg Arg Leu Cys Gly Leu Pro
 1                   5                  10                  15
Gly Leu Gln Arg Pro Ala Ala Glu Met Pro Leu Arg Ala Arg Ser Asp
                20                  25                  30
Gly Ala Gly Pro Leu Tyr Ser His His Leu Pro Thr Ser Pro Leu Gln
            35                  40                  45
Lys Ala Leu Leu Ala Ala Gly Ser Ala Ala Met Ala Leu Tyr Asn Pro
        50                  55                  60
Tyr Arg His Asp Met Val Ala Val Leu Gly Glu Thr Thr Gly His Arg
65                  70                  75                  80
Thr Leu Lys Val Leu Arg Asp Gln Met Arg Arg Asp Pro Glu Gly Ala
                85                  90                  95
Gln Ile Leu Gln Glu Arg Pro Arg Ile Ser Thr Ser Thr Leu Asp Leu
            100                 105                 110
Gly Lys Leu Gln Ser Leu Pro Glu Gly Ser Leu Gly Arg Glu Tyr Leu
        115                 120                 125
Arg Phe Leu Asp Val Asn Arg Val Ser Pro Asp Thr Arg Ala Pro Thr
        130                 135                 140
Arg Phe Val Asp Asp Glu Glu Leu Ala Tyr Val Ile Gln Arg Tyr Arg
145                 150                 155                 160
Glu Val His Asp Met Leu His Thr Leu Leu Gly Met Pro Thr Asn Ile
                165                 170                 175
Leu Gly Glu Ile Val Val Lys Trp Phe Glu Ala Val Gln Thr Gly Leu
```

5057

```
            180                    185                    190
Pro Met Cys Ile Leu Gly Ala Phe Phe Gly Pro Ile Arg Leu Gly Ala
        195                    200                    205
Gln Ser Leu Gln Val Leu Val Ser Glu Leu Ile Pro Trp Ala Val Gln
    210                    215                    220
Asn Gly Arg Arg Ala Pro Cys Val Leu Asn Leu Tyr Tyr Glu Arg Arg
225                    230                    235                    240
Trp Glu Gln Ser Leu Arg Ala Leu Arg Glu Glu Leu Gly Ile Thr Ala
                245                    250                    255
Pro Pro Met His Val Gln Gly Leu Ala
            260                    265
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<210> 5887
<211> 3779
<212> DNA
<213> Homo sapiens

<400> 5887
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120
aaccaactgg gacttgattg gtcgaaaaga agtgcctaaa cagcaagctg cttaccgcaa
180
tctcggtcag aatttgtggg ggccccacag atatgggtgc ctggcggggg tccgggtgcg
240
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420
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480
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540
caacggccag ccaattacca aaatggcctg tggggctgaa ttcagtatga taatggactg
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caaaggaaac ctctattcct ttgggtgccc tgaatatggt cagctgggac acaactcaga
660
tgggaagttc atcgcccggg cacagcggat agagtacgac tgtgaactag ttccccggcg
720
agtggccatc ttcattgaga agacgaaaga tggacagatt ctgcctgtac caagcggaag
780
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960
accaagggct tcaccaccgc agtcaagtgc ctccggggga cagtcgcagc tgtctatgat
1020
gtaaccctga acttcagagg aaacaagaac ccgtccctgc tggggatcct ctacgggaag
1080
```

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aagtacgagg cggacatgtg cgtgaggaga tttcctctgg aagacatccc gctggatgaa
1140
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1200
aagactctgg atggcatgtt tccaggggag cagtttttaga ctcctccccg gagccgttgg
1260
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1320
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1440
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1560
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2160
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2580
cggtgtcact gtggcccggc caccctgag cgcccagctc cctacctcct ggacgtctct
2640
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2700
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5059

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2760

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2820

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2880

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2940

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3000

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3060

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3120

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3180

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3240

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3300

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3360

gagattctcc tgcaccttcc tcatgccgca cgctgctcat ccgtctccat gtgtgtttag
3420

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3480

gtacgaccat gcacatatgt gacctggaaa atgcaaattt agatctttta tgatttaatt
3540

gttattgttt cccatagaag ttccctccct ttgaaattaa tatataatgt ataaattctg
3600

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3660

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3720

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3779

<210> 5888
<211> 166
<212> PRT
<213> Homo sapiens

<400> 5888
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Glu Asp Arg Asp Thr Val Val Glu Gly Leu Arg Arg Leu Ser Asp Tyr
            20   25   30
Pro Glu Tyr Met Trp Phe Leu Leu Tyr Cys Glu Gly Thr Arg Phe Thr
        35   40   45
Glu Thr Lys His Arg Val Ser Met Glu Val Ala Ala Ala Lys Gly Leu
    50   55   60
Pro Val Leu Lys Tyr His Leu Leu Pro Arg Thr Lys Gly Phe Thr Thr
65   70   75   80
Ala Val Lys Cys Leu Arg Gly Thr Val Ala Ala Val Tyr Asp Val Thr

5060

```
                    85                  90                  95
Leu Asn Phe Arg Gly Asn Lys Asn Pro Ser Leu Leu Gly Ile Leu Tyr
                100                105                110
Gly Lys Lys Tyr Glu Ala Asp Met Cys Val Arg Arg Phe Pro Leu Glu
            115                120                125
Asp Ile Pro Leu Asp Glu Lys Glu Ala Ala Gln Trp Leu His Lys Leu
        130                135                140
Tyr Gln Glu Lys Asp Ala Leu Gln Glu Val Lys Thr Leu Asp Gly Met
145                150                155                160
Phe Pro Gly Glu Gln Phe
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```

<210> 5889
<211> 2198
<212> DNA
<213> Homo sapiens

<400> 5889
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120
cactgcagcc ttgacttccc aggctcaagc cattctccta cctcagcctc ccaagcagtt
180
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300
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360
cacccctgc caggagcagc ccaaggaagt ccttaaggct cccagcacct cgggccttca
420
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480
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540
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780
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840
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960
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1020
aagaaagaac tctgtgaagg tgatgtacaa gtgcctgtgg ccaaactgtg gcaaagttct
1080
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1200

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1260

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1320

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1380

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1440

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1500

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1560

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1680

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1740

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1800

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1860

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1920

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1980

aaactgacca aggctattca gcagtgaacc agtgaccaaa gaattaatta ccctccgttt
2040

cccacatccc cactctctag gggattagct tgtgcgtgtc aaaagaagga acagctcgtt
2100

ctgcttcctg ctgagtcggt gaattctttg ctttctaaac tcttccagaa aggactgtga
2160

gcaagatgaa tttacttttc ttaaaaaaaa aaaaaaaa
2198

<210> 5890
<211> 118
<212> PRT
<213> Homo sapiens

<400> 5890
Ala Ser Arg Pro Ser Arg Ala Val Arg Ala Gly Glu Ala Gly Arg Val
1   5   10   15
Leu Pro Leu Val Ala Gly Arg Asp Ser Leu Ala Leu Phe Pro Arg Leu
            20   25   30
Glu Cys Ser Gly Thr Ile Thr Ala His Cys Ser Leu Asp Phe Pro Gly
        35   40   45
Ser Ser His Ser Pro Thr Ser Ala Ser Gln Ala Val Gly Thr Thr Gly
    50   55   60
Glu Glu Arg Gln Gln His Gly Glu Cys Pro Val Pro Thr Pro Trp Lys

5062

```
65                  70                  75                  80
Ala Val Pro Pro Gly Ser Pro Gly Val Gly Thr Gln Cys Leu Gly Gly
                    85                  90                  95
Ala Leu Gly Cys Pro Thr Leu Gly Ala Thr Ala Arg Arg Gly Arg Ser
                100                 105                 110
Pro Ala Phe His His Leu
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<210> 5891
<211> 1459
<212> DNA
<213> Homo sapiens

<400> 5891
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120
gtgcgcttac agttcctaac cccgaccctg cgcgcagccc gcactatggc agccccgccg
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480
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600
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660
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720
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780
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840
ggccccatgc agaccctccc aaaggatact gccttctcaa gatcataggc ctcagactcc
900
aactggtgtt atcccagggt tccgtttgct gaagtaaaaa cactgatttt aaaatcccag
960
tgggtacctt tgtatggtgg cacaagtggc cgaatcaggc tgaggaatct acggcttggt
1020
tccagctgtg cagctgactt ctgtgagact ggggccagcc acactactct ctaggcctca
1080
ggggtcaagg agctcagagg agggccctga ggtctctttc cggtgggtat gttcattctt
1140
caactgttct tatgtcacag agggctcctt gctggtgggc agtgggttgt aaatactttt
1200
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taaaaaacac taagttcctt atctcagatg ctgttctact ggagaagttc tagattccca
1260

ctgtccaata gaaacacgtg agccatatat gtaattaaaa tgtttctagt agctgcatta
1320

caaaaaagaa gcctgggcac tgtggctcac tcctgtaatc tcagaacttt gggaggctga
1380

ggcaggtgga tcacttgagc tcaggagctt gagaccagcc tgggcaacat ggtgaaaccc
1440

agtttctaca aaaaaaaaa
1459


<210> 5892
<211> 212
<212> PRT
<213> Homo sapiens

<400> 5892
Met Ala Ala Pro Pro Gln Leu Arg Ala Leu Leu Val Val Val Asn Ala
1               5                   10                  15
Leu Leu Arg Lys Arg Arg Tyr His Ala Ala Leu Ala Val Leu Lys Gly
            20                  25                  30
Phe Arg Asn Gly Ala Val Tyr Gly Ala Lys Ile Arg Ala Pro His Ala
        35                  40                  45
Leu Val Met Thr Phe Leu Phe Arg Asn Gly Ser Leu Gln Glu Lys Leu
    50                  55                  60
Trp Ala Ile Leu Gln Ala Thr Tyr Ile His Ser Trp Asn Leu Ala Arg
65                  70                  75                  80
Phe Val Phe Thr Tyr Lys Gly Leu Arg Ala Leu Gln Ser Tyr Ile Gln
                85                  90                  95
Gly Lys Thr Tyr Pro Ala His Ala Phe Leu Ala Ala Phe Leu Gly Gly
            100                 105                 110
Ile Leu Val Phe Gly Glu Asn Asn Asn Ile Asn Ser Gln Ile Asn Met
            115                 120                 125
Tyr Leu Leu Ser Arg Val Leu Phe Ala Leu Ser Arg Leu Ala Val Glu
    130                 135                 140
Lys Gly Tyr Ile Pro Glu Pro Arg Trp Asp Pro Phe Pro Leu Leu Thr
145                 150                 155                 160
Ala Val Val Trp Gly Leu Val Leu Trp Leu Phe Glu Tyr His Arg Ser
                165                 170                 175
Thr Leu Gln Pro Ser Leu Gln Ser Ser Met Thr Tyr Leu Tyr Glu Asp
            180                 185                 190
Ser Asn Val Trp His Asp Ile Ser Asp Phe Leu Val Tyr Asn Lys Ser
        195                 200                 205
Arg Pro Ser Asn
        210


<210> 5893
<211> 1389
<212> DNA
<213> Homo sapiens

<400> 5893
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60

5064

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120
agctcccgaa gaagagccag aatgagaagt accggctgaa gtacctgcgg ctgcgcaaag
180
cggccaaggc cacggtgttt gaaaatgctg ctatttgtga tgaaattgct cgtcttgagg
240
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360
tgacttatgg tgtggccagc tctgtgggaa ctatacaggg agctgggcct atttcagggc
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gttcctgaag atgacccca gaatgccatt gtcagctctt ctgcagatgc ttgtcatgca
720
gaactgctca ggactataag cactactatg gggaaactaa tgcctaacct gcttccagct
780
ggagctgact tttttggatt ttctcatcca gccatccaca acctgatcca gagctgtcca
840
ggagctcgaa aatgcatcaa ttaccagtgg gtgaaatttg atgtgtgcaa acctggagat
900
gggcagctac ctgaggggct gccggagaat gatgcagcta tgagctttga agcctttcag
960
agacagatct ttgatgaaga tcagaatgat ccccttctgc aggatccttg gacctccca
1020
gagcttcagc ctgcagcctt tgtgtcttct taccagccca tgtacctgac acatgaaccc
1080
ttggtagata ctcacctgca gcacttgaag tctccatcac agggtagccc aattcagtct
1140
tcagattgaa caagaaggga tcagatgcca catcgttttt gtcgtgatta atttaactta
1200
aactaaaatt ttgggtatat gaaagaaggc agcaattcag aagtaaagaa gatactaacg
1260
tatttcatca tggaaggtcc tgtggtgatg gttttccctg ggaaaacctt cagctgcttt
1320
attttagta ataaattct cttgtcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1380
aaaaaaaaaa
1389


<210> 5894
<211> 260
<212> PRT
<213> Homo sapiens

<400> 5894
Met Val Trp Pro Ala Leu Trp Glu Leu Tyr Arg Glu Leu Gly Leu Phe

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   1               5                        10                    15
Gln Gly Pro Ala Leu Gly Leu Arg Asn His Leu Gly Arg Lys Leu Arg
            20                    25                    30
Arg Arg Lys Lys Lys Lys Ala Lys Arg Thr Thr Asn Trp Lys Ile Ile
        35                    40                    45
Thr Asp Arg Pro Gly Phe His Asp Glu Ser Ala Ile Tyr Pro Val Gly
    50                    55                    60
Tyr Cys Ser Thr Arg Ile Tyr Ala Ser Met Lys Cys Pro Asp Gln Lys
65                    70                    75                    80
Cys Leu Tyr Thr Cys Gln Ile Lys Asp Gly Gly Val Gln Pro Gln Phe
                85                    90                    95
Glu Ile Val Pro Glu Asp Asp Pro Gln Asn Ala Ile Val Ser Ser Ser
            100                   105                   110
Ala Asp Ala Cys His Ala Glu Leu Leu Arg Thr Ile Ser Thr Thr Met
        115                   120                   125
Gly Lys Leu Met Pro Asn Leu Leu Pro Ala Gly Ala Asp Phe Phe Gly
        130                   135                   140
Phe Ser His Pro Ala Ile His Asn Leu Ile Gln Ser Cys Pro Gly Ala
145                   150                   155                   160
Arg Lys Cys Ile Asn Tyr Gln Trp Val Lys Phe Asp Val Cys Lys Pro
                165                   170                   175
Gly Asp Gly Gln Leu Pro Glu Gly Leu Pro Glu Asn Asp Ala Ala Met
            180                   185                   190
Ser Phe Glu Ala Phe Gln Arg Gln Ile Phe Asp Glu Asp Gln Asn Asp
        195                   200                   205
Pro Leu Leu Pro Gly Ser Leu Asp Leu Pro Glu Leu Gln Pro Ala Ala
    210                   215                   220
Phe Val Ser Ser Tyr Gln Pro Met Tyr Leu Thr His Glu Pro Leu Val
225                   230                   235                   240
Asp Thr His Leu Gln His Leu Lys Ser Pro Ser Gln Gly Ser Pro Ile
                245                   250                   255
Gln Ser Ser Asp
            260
```

<210> 5895
<211> 2748
<212> DNA
<213> Homo sapiens

<400> 5895
gcaacaataa gaaagatgct gagcttctgg tggcctttgn gtctaattct ggccacacag
60
agaatcagtc ggcctattgt caacctcttt gtttcccggg accttggtgg cagttctgca
120
gccacagagg cagtggcgat tttgacagcc acatacccctg tgggtcacat gccatacggc
180
tggttgacgg aaatccgtgc tgtgtatcct gctttcgaca agaataaccc cagcaacaaa
240
ctggtgagca cgagcaacac agtcacggca gcccacatca agaagttcac cttcgtctgc
300
atggctctgt cactcacgct ctgtttcgtg atgttttgga cacccaacgt gtctgagaaa
360
atcttgatag acatcatcgg agtggacttt gcctttgcag aactctgtgt tgttcctttg
420

```
cggatcttct ccttcttcc agttccagtc acagtgaggg cgcatctcac cgggtggctg
480
atgacactga agaaaacctt cgtccttgcc cccagctctg tgctgcggat catcgtcctc
540
atcgccagcc tcgtggtcct accctacctg ggggtgcacg gtgcgaccct gggcgtgggc
600
tccctcctgg cgggctttgt gggagaatcc accatggtcg ccatcgctgc gtgctatgtc
660
taccggaagc agaaaaagaa gatggagaat gagtcggcca cggagggggga agactctgcc
720
atgacagaca tgcctccgac agaggaggtg acagacatcg tggaaatgag agaggagaat
780
gaataaggca cgggacgcca tgggcactgc agggacagtc agtcaggatg acacttcggc
840
atcatctctt ccctctccca tcgtattttg ttccttttt tttgttttgt tttggtaatg
900
aaagaggcct tgatttaaag gtttcgtgtc aattctctag catactgggt atgctcacac
960
tgacggggggg acctagtgaa tggtctttac tgttgctatg taaaaacaaa cgaaacaact
1020
gacttcatac ccctgcctca cgaaaaccca aaagacacag ctgcctcacg gttgacgttg
1080
tgtcctcctc ccctggacaa tctcctcttg gaaccaaagg actgcagctg tgccatcgcg
1140
cctcggtcac cctgcacagc aggccacaga ctctcctgtc ccccttcatc gctcttaaga
1200
atcaacaggt taaaactcgg cttcctttga tttgcttccc agtcacatgg ccgtacaaag
1260
agatggagcc ccggtggcct cttaaatttc ccttccgcca cggagttcga aaccatctac
1320
tccacacatg caggaggcgg gtggcacgct gcagcccgga gtccccgttc acactgagga
1380
acggagacct gtgaccacag caggctgaca gatggacaga atctcccgta gaaaggtttg
1440
gtttgaaatg ccccgggggc agcaaactga catggttgaa tgatagcatt tcactctgcg
1500
ttctcctaga tctgagcaag ctgtcagttc tcacccccac cgtgtatata catgagctaa
1560
cttttttaaa ttgtcacaaa agcgcatctc cagattccag accctgccgc atgactttc
1620
ctgaaggctt gctttccct cgcctttcct gaaggtcgca ttagagcgag tcacatggag
1680
catcctaact ttgcatttta gtttttacag tgaactgaag ctttaagtaa gtctcatcca
1740
gcattctaat gccaggttgc tgtagggtaa cttttgaagt agatatatta cctggttctg
1800
ctatccttag tcataactct gcggtacagg taattgagaa tgtactacgg tacttccctc
1860
ccacaccata cgataaagca agacatttta taacgatacc agagtcacta tgtggtcctc
1920
cctgaaataa cgcattcgaa atccatgcag tgcagtatat ttttctaagt tttggaaagc
1980
aggtttttttc ctttaaaaaa attatagaca cggttcacta aattgattta gtcagaattc
2040
```

```
ctagactgaa agaacctaaa caaaaaaata ttttaaagat ataaatatat gctgtatatg
2100
ttatgtaatt tattttaggc tataatacat ttcctatttt cgcattttca ataaaatgtc
2160
tctaatacaa tacggtgatt gcttgtgtgc tcaacatacc tgcagttgaa acgtattgta
2220
tcaatgaaca ttgtacctta ttggcagcag ttttataaag tccgtcattt gcatttgaat
2280
gtaaggctca gtaaatgaca gaactatttt tcattatggg taactgggga ataaatgggt
2340
cactggagta ggaatagaag tgcaagctgg aaaggcaaaa atgagaaaga aaaaggcagg
2400
ccctttgtgt ctaccgtttt cagtgctgtg tgatcatatt gttcctcaca gcaaaaaaga
2460
atgcaagggc ataatgttag ctgtgaacat gccagggttg cattcacatt cctgggtacc
2520
cagtgctgat ggggtgtgcc cacgtgggga catgtccttg gcgtgcttcc tcagagtggc
2580
ttttcctcca ttaatacata tatgagtact gaagaattaa tttgcatagc tgctttgcag
2640
tggtttcaga ggcagatctg agaagattaa aaaaaaatct caatgtatca gcttttttta
2700
aaggacatta ctagaaaatt aaacagtatt ttttaacaaa aaaaaaaa
2748
```

```
<210> 5896
<211> 261
<212> PRT
<213> Homo sapiens
```

```
<400> 5896
Ala Thr Ile Arg Lys Met Leu Ser Phe Trp Trp Pro Leu Xaa Leu Ile
 1               5                  10                  15
Leu Ala Thr Gln Arg Ile Ser Arg Pro Ile Val Asn Leu Phe Val Ser
            20                  25                  30
Arg Asp Leu Gly Gly Ser Ser Ala Ala Thr Glu Ala Val Ala Ile Leu
        35                  40                  45
Thr Ala Thr Tyr Pro Val Gly His Met Pro Tyr Gly Trp Leu Thr Glu
    50                  55                  60
Ile Arg Ala Val Tyr Pro Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys
65                  70                  75                  80
Leu Val Ser Thr Ser Asn Thr Val Thr Ala Ala His Ile Lys Lys Phe
                85                  90                  95
Thr Phe Val Cys Met Ala Leu Ser Leu Thr Leu Cys Phe Val Met Phe
            100                 105                 110
Trp Thr Pro Asn Val Ser Glu Lys Ile Leu Ile Asp Ile Ile Gly Val
        115                 120                 125
Asp Phe Ala Phe Ala Glu Leu Cys Val Val Pro Leu Arg Ile Phe Ser
    130                 135                 140
Phe Phe Pro Val Pro Val Thr Val Arg Ala His Leu Thr Gly Trp Leu
145                 150                 155                 160
Met Thr Leu Lys Lys Thr Phe Val Leu Ala Pro Ser Ser Val Leu Arg
                165                 170                 175
Ile Ile Val Leu Ile Ala Ser Leu Val Val Leu Pro Tyr Leu Gly Val
```

```
                 180                    185                    190
His Gly Ala Thr Leu Gly Val Gly Ser Leu Leu Ala Gly Phe Val Gly
             195                    200                    205
Glu Ser Thr Met Val Ala Ile Ala Ala Cys Tyr Val Tyr Arg Lys Gln
         210                    215                    220
Lys Lys Lys Met Glu Asn Glu Ser Ala Thr Glu Gly Glu Asp Ser Ala
225                    230                    235                    240
Met Thr Asp Met Pro Pro Thr Glu Glu Val Thr Asp Ile Val Glu Met
                 245                    250                    255
Arg Glu Glu Asn Glu
                 260
```

<210> 5897
<211> 1930
<212> DNA
<213> Homo sapiens

<400> 5897
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ngcgccgata agaggcagca gttcggaagc cggttcctga gagatccggc gcgcgtcttc
60
caccacaatg cctggtaatc actctgcccc ttcgcccggc ctgtcgctga ccctctgtcc
120
cgccgcctcg gagcattccg aaaagcccct gaccgccggc cacgagtcaa gctgccctac
180
ccggccacga gtcaagctgc cctacccgag gcactctcca aggggagaga aactcctagg
240
ccagcgactc accctgcccg cagccaggac gtgaagcccc taagctgccc gtttgatttt
300
ctcagggaca atgtggagtg gtcggaagag caagccgcgg cggcggagag aaaagtccag
360
gagaacagta tccagcgggt gtgccaggag aaacaagttg attatgagat caatgcccac
420
aaatactgga atgacttcta caaaatccac gaaatgggt ttttcaagga tagacattgg
480
cttttaccg aattccctga gctggcacct agccaaaatc aaaatcattt gaaggactgg
540
ttcttggaga acaagagtga agtatgtgaa tgtagaaaca atgaggatgg acctggttta
600
ataatggaag aacagcacaa gtgttcttcg aagagccttg aacataaaac acagacacct
660
cctgtggagg agaatgtaac tcagaaaatt agtgacctgg aaatttgtgc tgatgagttt
720
cctggatcct cagccaccta ccgaatactg gaggttggct gtggtgtggg aaacacagtc
780
tttccaattt tacaaacgaa caatgaccca ggactctttg tttattgctg tgatttttct
840
tccacagcta tagaactggt ccagacaaat tcagaatatg atccttctcg gtgttttgcc
900
tttgttcacg acctgtgtga tgaagagaag agttacccag tgcccaaggg cagtcttgat
960
attatcattc tcatatttgt tctttcagca attgttccag acaagatgca gaaggctatc
1020
aacaggctga gcaggcttct gaaacctggg gggatggtac ttctgcgaga ttacggccgc
1080
```

tatgacatgg ctcagcttcg gtttaaaaaa ggtcagtgtc tatctggaaa tttctacgtg
1140

agaggtgatg gaaccagagt ttacttcttc acacaagagg aactggacac gcttttcacc
1200

actgctggac tggaaaaagt tcagaacctg gtggatcgcc gactgcaggt gaaccgagga
1260

aagcaactga caatgtaccg ggtttggatt cagtgcaaat actgcaagcc ccttctgtcc
1320

agcaccagct gagaggcacc tgctgccaac acgatgcaag cccattgtgt ttccgggctt
1380

tttaaaaaa aaaattgtag cactgggcgt ggtgcatgcc tgtaatccca gccactcagg
1440

aggctgaggc ggggaggatc cattgagccc agcagtccaa cctgggcaaa atagtgagag
1500

accctgtatc tgaaagtaat aataaaaata aagaatata aatgaggtct cgttgatgtt
1560

ggacaattca agaattcaga cttgaacctt aaacctagga aaagttactt tgtatcagga
1620

ttctaacaat tatgcttcat atttgtgaag tcctttaaaa cataattttc tcaagttctt
1680

tctttgagat ctcaatctgt cttagcattt tgtaactaat aactgaaatt ttattcaaag
1740

gaattgtaaa ccttaaacca ccaatttatt tccatgtgaa aaagtgttat atatgacaag
1800

tgtttttga ttgtaattgc gttaaatctt ttgagagtgt aaatgccggc aaagtttcgc
1860

tcttgtcacc taggctggag tgcagtggtt cgatctcggc tcactgcaac ctctgcctcc
1920

agggntcaag
1930

<210> 5898
<211> 242
<212> PRT
<213> Homo sapiens

<400> 5898
Met Glu Glu Gln His Lys Cys Ser Ser Lys Ser Leu Glu His Lys Thr
1   5   10   15
Gln Thr Pro Pro Val Glu Glu Asn Val Thr Gln Lys Ile Ser Asp Leu
            20   25   30
Glu Ile Cys Ala Asp Glu Phe Pro Gly Ser Ser Ala Thr Tyr Arg Ile
            35   40   45
Leu Glu Val Gly Cys Gly Val Gly Asn Thr Val Phe Pro Ile Leu Gln
        50   55   60
Thr Asn Asn Asp Pro Gly Leu Phe Val Tyr Cys Cys Asp Phe Ser Ser
65   70   75   80
Thr Ala Ile Glu Leu Val Gln Thr Asn Ser Glu Tyr Asp Pro Ser Arg
                85   90   95
Cys Phe Ala Phe Val His Asp Leu Cys Asp Glu Glu Lys Ser Tyr Pro
                100   105   110
Val Pro Lys Gly Ser Leu Asp Ile Ile Ile Leu Ile Phe Val Leu Ser
            115   120   125
Ala Ile Val Pro Asp Lys Met Gln Lys Ala Ile Asn Arg Leu Ser Arg

```
       130                   135                   140
Leu Leu Lys Pro Gly Gly Met Val Leu Leu Arg Asp Tyr Gly Arg Tyr
145                   150                   155                   160
Asp Met Ala Gln Leu Arg Phe Lys Lys Gly Gln Cys Leu Ser Gly Asn
                  165                   170                   175
Phe Tyr Val Arg Gly Asp Gly Thr Arg Val Tyr Phe Phe Thr Gln Glu
                  180                   185                   190
Glu Leu Asp Thr Leu Phe Thr Thr Ala Gly Leu Glu Lys Val Gln Asn
              195                   200                   205
Leu Val Asp Arg Arg Leu Gln Val Asn Arg Gly Lys Gln Leu Thr Met
          210                   215                   220
Tyr Arg Val Trp Ile Gln Cys Lys Tyr Cys Lys Pro Leu Leu Ser Ser
225                   230                   235                   240
Thr Ser
```

<210> 5899
<211> 1589
<212> DNA
<213> Homo sapiens

<400> 5899
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nngctagcag cccgcatcgt ggacacaccc tgcaatgaga tgaacaccga caccttcctc
60
gaggagatta acaaagttgg aaaggaactg gggatcatcc caaccatcat ccgggatgag
120
gaactgaaga cgagaggatt tggaggaatc tatggggttg gcaaagccgc cctgcatccc
180
ccagccctgg ccgtcctcag ccacacccca gatggagcca cgcagaccat cgcctgggtg
240
ggcaaaggca tcgtctatga cactggaggc ctcagcatca aagggaagac taccatgccg
300
gggatgaagc gagactgcgg gggtgctgcg gccgtcctgg gggccttcag agccgcaatc
360
aagcagggtt tcaaagacaa cctccacgct gtgttctgct tggctgagaa ctcggtgggg
420
cccaatgcga caaggccaga tgacatccac ctgctgtact cagggaagac ggtggaaatc
480
aacaacacgg atgccgaggg caggctggtg ctggcagatg gcgtgtccta tgcttgcaag
540
gacctggggg ccgacatcat cctggacatg gccaccctga ccggggctca gggcattgcc
600
acagggaagt accacgccgc ggtgctcacc aacagcgctg agtgggaggc cgcctgtgtg
660
aaggcgggca ggaagtgtgg ggacctggtg cacccgctgg tctactgccc cgagctgcac
720
ttcagcgagt tcacctcagc tgtggcggac atgaagaact cagtggcgga ccgagacaac
780
agccccagct cctgtgctgg cctcttcatc gcctcacaca tcggcttcga ctggcccgga
840
gtctgggtcc acctggacat tgctgcaccg gtgcatgctg gtgagcgagc cacaggcttc
900
ggtgtggccc tcctgctggc gctcttcggc cgtgcctctg aggaccctct gctgaacctg
960
```

```
gtgtccccac tgggctgtga ggtggatgtc gaggaggggg acctggggag ggactccaag
1020

agacgcaggc ttgtgtgagc ctcctgcctc ggccctgaca aacggggatc ttttacctca
1080

ctttgcactg attaatttta agcaattgaa agattgccct tcatatgggt tttggtttgt
1140

ctttctggtc gtcagcgtgg tggtggaaac agctgaagtt ttaggagaca gcttagggtt
1200

tggtgcgggc cacggggagg ggaccgggaa gcgctggggc ttgtttctgt ttgttactta
1260

caggactgag acatcttctg taaactgcta cccctggggc cttctgcacc ccggggtgag
1320

gcctcctgcc tgcctggtgc cctgtcccag ccccaggtcc tgtgcagggc acctgcgtgg
1380

ctgacagcca ggctcttact ccagccgggg ctgccagcgc atccagccag cccagccctg
1440

tgaaagatgg agctgacttg ctgcagggga cctgatttat agggcaagag aagtcacact
1500

ccggcctctc agaattcact tgaggttcaa ttaaatacag tcacaccgcc ccctcaaaaa
1560

aaaaaaaaaa aaaaaaaaca aaaaaaaaa
1589


<210> 5900
<211> 345
<212> PRT
<213> Homo sapiens

<400> 5900
Xaa Leu Ala Ala Arg Ile Val Asp Thr Pro Cys Asn Glu Met Asn Thr
 1               5                  10                  15
Asp Thr Phe Leu Glu Glu Ile Asn Lys Val Gly Lys Glu Leu Gly Ile
            20                  25                  30
Ile Pro Thr Ile Ile Arg Asp Glu Glu Leu Lys Thr Arg Gly Phe Gly
        35                  40                  45
Gly Ile Tyr Gly Val Gly Lys Ala Ala Leu His Pro Pro Ala Leu Ala
    50                  55                  60
Val Leu Ser His Thr Pro Asp Gly Ala Thr Gln Thr Ile Ala Trp Val
65                  70                  75                  80
Gly Lys Gly Ile Val Tyr Asp Thr Gly Gly Leu Ser Ile Lys Gly Lys
                85                  90                  95
Thr Thr Met Pro Gly Met Lys Arg Asp Cys Gly Gly Ala Ala Ala Val
            100                 105                 110
Leu Gly Ala Phe Arg Ala Ala Ile Lys Gln Gly Phe Lys Asp Asn Leu
        115                 120                 125
His Ala Val Phe Cys Leu Ala Glu Asn Ser Val Gly Pro Asn Ala Thr
    130                 135                 140
Arg Pro Asp Asp Ile His Leu Leu Tyr Ser Gly Lys Thr Val Glu Ile
145                 150                 155                 160
Asn Asn Thr Asp Ala Glu Gly Arg Leu Val Leu Ala Asp Gly Val Ser
                165                 170                 175
Tyr Ala Cys Lys Asp Leu Gly Ala Asp Ile Ile Leu Asp Met Ala Thr
            180                 185                 190
Leu Thr Gly Ala Gln Gly Ile Ala Thr Gly Lys Tyr His Ala Ala Val
```

```
            195                    200                    205
Leu Thr Asn Ser Ala Glu Trp Glu Ala Ala Cys Val Lys Ala Gly Arg
    210                    215                    220
Lys Cys Gly Asp Leu Val His Pro Leu Val Tyr Cys Pro Glu Leu His
225                    230                    235                    240
Phe Ser Glu Phe Thr Ser Ala Val Ala Asp Met Lys Asn Ser Val Ala
                245                    250                    255
Asp Arg Asp Asn Ser Pro Ser Ser Cys Ala Gly Leu Phe Ile Ala Ser
                260                    265                    270
His Ile Gly Phe Asp Trp Pro Gly Val Trp Val His Leu Asp Ile Ala
            275                    280                    285
Ala Pro Val His Ala Gly Glu Arg Ala Thr Gly Phe Gly Val Ala Leu
            290                    295                    300
Leu Leu Ala Leu Phe Gly Arg Ala Ser Glu Asp Pro Leu Leu Asn Leu
305                    310                    315                    320
Val Ser Pro Leu Gly Cys Glu Val Asp Val Glu Glu Gly Asp Leu Gly
                325                    330                    335
Arg Asp Ser Lys Arg Arg Arg Leu Val
            340                    345
```

<210> 5901
<211> 984
<212> DNA
<213> Homo sapiens

<400> 5901

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ncggccgccg cagccatgac cgtggagttc gaggagtgcg tcaaggactc cccgcgcttc    60
agggcgacca ttgacgaggt ggagacggac gtggtggaga ttgaggccaa actggacaag   120
ctggtgaagc tgtgcagtgg catggtggaa gccggtaagg cctacgtcag caccagcagg   180
cttttcgtga gcggcgtccg cgacctgtcc cagcagtgcc agggcgacac cgtcatctcg   240
gaatgtctgc agaggttcgc tgacagccta caggaggtgg tgaactacca catgatcctg   300
tttgaccagg cccagaggtc cgtgcggcag cagctccaga gctttgtcaa agaggatgtg   360
cggaagttca aggagacaaa gaagcagttt gacaaggtgc gggaggacct ggagctgtcc   420
ctggtgagga acgcccaggc cccgaggcac cggccccacg aggtggagga agccaccggg   480
gccctcaccc tcaccaggaa gtgcttccgc acctggcac tggactatgt gctccagatc   540
aatgttctgc aggccaagaa gaagtttgag atcctggact ctatgctgtc cttcatgcac   600
gcccagtcca gcttcttcca gcagggctac agcctcctgc accagctgga cccctacatg   660
aagaagctgg cagccgagct ggaccagctg gtgatcgact ctgcggtgga aaagcgtgag   720
atggagcgaa agcacgccgc catccagcag cggacccctta gggacttctc ctacgatgag   780
tcgaaagtgg agtttgacgt ggacgcgccc agtggggtgg tgatggaggg ctacctcttc   840
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aagagggcca gcaacncttt caagacatgg aaccggcgct ggttctccat tcagaacagc
900

cagctggtct accagaagaa gctcaaggat gccctcaccg tggtggtgga tgacctccgc
960

ctgtgctctg tgaagccgtg tgag
984

<210> 5902
<211> 328
<212> PRT
<213> Homo sapiens

<400> 5902
Xaa Ala Ala Ala Ala Met Thr Val Glu Phe Glu Glu Cys Val Lys Asp
1   5   10   15
Ser Pro Arg Phe Arg Ala Thr Ile Asp Glu Val Glu Thr Asp Val Val
            20   25   30
Glu Ile Glu Ala Lys Leu Asp Lys Leu Val Lys Leu Cys Ser Gly Met
        35   40   45
Val Glu Ala Gly Lys Ala Tyr Val Ser Thr Ser Arg Leu Phe Val Ser
    50   55   60
Gly Val Arg Asp Leu Ser Gln Gln Cys Gln Gly Asp Thr Val Ile Ser
65   70   75   80
Glu Cys Leu Gln Arg Phe Ala Asp Ser Leu Gln Glu Val Val Asn Tyr
                85   90   95
His Met Ile Leu Phe Asp Gln Ala Gln Arg Ser Val Arg Gln Gln Leu
            100   105   110
Gln Ser Phe Val Lys Glu Asp Val Arg Lys Phe Lys Glu Thr Lys Lys
        115   120   125
Gln Phe Asp Lys Val Arg Glu Asp Leu Glu Leu Ser Leu Val Arg Asn
    130   135   140
Ala Gln Ala Pro Arg His Arg Pro His Glu Val Glu Glu Ala Thr Gly
145   150   155   160
Ala Leu Thr Leu Thr Arg Lys Cys Phe Arg His Leu Ala Leu Asp Tyr
                165   170   175
Val Leu Gln Ile Asn Val Leu Gln Ala Lys Lys Lys Phe Glu Ile Leu
            180   185   190
Asp Ser Met Leu Ser Phe Met His Ala Gln Ser Ser Phe Phe Gln Gln
            195   200   205
Gly Tyr Ser Leu Leu His Gln Leu Asp Pro Tyr Met Lys Lys Leu Ala
        210   215   220
Ala Glu Leu Asp Gln Leu Val Ile Asp Ser Ala Val Glu Lys Arg Glu
225   230   235   240
Met Glu Arg Lys His Ala Ala Ile Gln Gln Arg Thr Leu Arg Asp Phe
                245   250   255
Ser Tyr Asp Glu Ser Lys Val Glu Phe Asp Val Asp Ala Pro Ser Gly
                260   265   270
Val Val Met Glu Gly Tyr Leu Phe Lys Arg Ala Ser Asn Xaa Phe Lys
            275   280   285
Thr Trp Asn Arg Arg Trp Phe Ser Ile Gln Asn Ser Gln Leu Val Tyr
        290   295   300
Gln Lys Lys Leu Lys Asp Ala Leu Thr Val Val Val Asp Asp Leu Arg
305   310   315   320
Leu Cys Ser Val Lys Pro Cys Glu

325

```
<210> 5903
<211> 3734
<212> DNA
<213> Homo sapiens

<400> 5903
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1380
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tatgtcctgc ggtttgacaa cacctacagc ttcattcatg ccaagaaggt caatttcact
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1500

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1560

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1680

ccgtgtctat caaataccta aggagtcccc aggagctggc tggccatcgt gataggatct
1740

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1860

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1920

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1980

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2040

aggaggtggc ctgagtcagc acacatcttc ccactcggta gacaggctgg cctctccctc
2100

actttgagac tttggcaact cctgggccac acggcctgcc tctttgatta ctaatgattg
2160

tcagtgactc agagcttcct gggacttcgg gtacccaccc gctgttctcc atgcaaacaa
2220

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2280

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2340

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2400

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2460

gactgacctg agcaaggtct tactaagcag tcccatctct gtgggaggca tgcaacgcgt
2520

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2580

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2640

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2700

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2760

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2880

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3000

5076

```
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3180
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3240
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3360
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3420
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3480
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3540
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3600
gaaaataaga gctaattctt aataaggcct accgggtatc acgcaaaaac cctgtgctta
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3734
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<210> 5904
<211> 308
<212> PRT
<213> Homo sapiens
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<400> 5904
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Ala Lys Phe Arg Glu Asn Val Gln Asp Val Leu Pro Ala Leu Pro Asn
            20                  25                  30
Pro Asp Asp Tyr Phe Leu Leu Arg Trp Leu Arg Ala Arg Ser Phe Asp
            35                  40                  45
Leu Gln Lys Ser Glu Ala Met Leu Arg Lys His Val Glu Phe Arg Lys
        50                  55                  60
Gln Lys Asp Ile Asp Asn Ile Ile Ser Trp Gln Pro Pro Glu Val Ile
65                  70                  75                  80
Gln Gln Tyr Leu Ser Gly Gly Met Cys Gly Tyr Asp Leu Asp Gly Cys
                85                  90                  95
Pro Val Trp Tyr Asp Ile Ile Gly Pro Leu Asp Ala Lys Gly Leu Leu
            100                 105                 110
Leu Ser Ala Ser Lys Gln Asp Met Ile Arg Lys Gly Ile Lys Val Cys
        115                 120                 125
Glu Leu Leu Leu His Glu Cys Glu Leu Gln Thr Gln Lys Leu Gly Arg
    130                 135                 140
Lys Ile Glu Met Ala Leu Met Val Phe Asp Met Glu Gly Leu Ser Leu
145                 150                 155                 160
Lys His Leu Trp Lys Pro Ala Val Glu Val Tyr Gln Gln Phe Phe Ser
```

```
                165                    170                    175
Ile Leu Glu Ala Asn Tyr Pro Glu Thr Leu Lys Asn Leu Ile Val Ile
            180                    185                    190
Arg Ala Pro Lys Leu Phe Pro Met Ala Phe Asn Leu Val Lys Ser Phe
            195                    200                    205
Met Ser Glu Asp Thr Arg Lys Lys Ile Met Val Leu Gly Ala Asn Trp
    210                    215                    220
Lys Glu Val Leu Leu Lys His Ile Ser Pro Asp Gln Val Pro Val Glu
225                    230                    235                    240
Tyr Gly Gly Thr Met Thr Asp Pro Asp Gly Asn Pro Lys Cys Lys Ser
                245                    250                    255
Lys Ile Asn Tyr Gly Gly Asp Ile Pro Arg Lys Tyr Tyr Val Arg Asp
            260                    265                    270
Gln Val Lys Gln Gln Tyr Glu His Ser Val Gln Ile Ser Arg Gly Ser
            275                    280                    285
Ser Gln Gln Val Glu Tyr Glu Ile Leu Phe Pro Gly Cys Val Leu Arg
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Trp Gln Phe Leu
305
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<210> 5905
<211> 2280
<212> DNA
<213> Homo sapiens
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120
attgtgacag cattatacag agaggcccgg atgcctccca cagacacgta gaatccttga
180
gaattatcaa taatctcata aattgtttga gatttgatgg agctaagctt ctccatggcc
240
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300
catggaggcg tgttgtacaa ggagctgttt ccagcctgca ccttgtattc caggaccgag
360
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420
gcagagccaa cattcttctg ggcaccagca aaaatcacac caaacttgga aacatccact
480
ggcttggaca ggaagtttga ggacatgtca caaaccagta ctgctccctt gacatcgggt
540
ataaagtcaa actccacacc atgcaccgtc tcatttgcgc aataatacac gtaggaggca
600
tctgggttga ggtttgactt tatacccgat gtcaagggag cagtactggt ttgtgacatg
660
tcctcaaact tcctgtccaa gccagtggat gtttccaagt ttagggtgat ttttgctggt
720
gcccagaaga atgttggctc tgctggggtc accgtggtga ttgtccgtga tgacctgctg
780
gggtttgccc tccgagagtg cccctcggtc ctggaataca aggtgcaggc tggaaacagc
840
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5078

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tccttgtaca acacgcctcc atgtttcagc atctacgtca tgggcttggt tctggagtgg
900
attaaaaaca atggaggtgc cgcggccatg gagaagctta gctccatcaa atctctaaca
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1020
agaagcaaga tgaatattcc attccgcatt ggcaatgcca aaggagatga tgctttagaa
1080
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1140
gtgggaggca tccgggcctc tctgtataat gctgtcacaa ttgaagacgt tcagaagctg
1200
gccgccttca tgaaaaaatt tttggagatg catcagctat gaacacatcc taaccaggat
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1320
taacacagta tttttctcaa atgaacatgt ttattgcaga ttcttctttt ttgaaagaac
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1440
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1620
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2160
tttgctgaaa agtctttccc ctattgttta tctattgtca gtattttatg ttgaatatgt
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2280
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<210> 5906
<211> 215
<212> PRT
<213> Homo sapiens
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<400> 5906

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Glu Ala Ser Gly Leu Arg Phe Asp Phe Ile Pro Asp Val Lys Gly Ala
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Val Leu Val Cys Asp Met Ser Ser Asn Phe Leu Ser Lys Pro Val Asp
            20              25              30
Val Ser Lys Phe Arg Val Ile Phe Ala Gly Ala Gln Lys Asn Val Gly
        35              40              45
Ser Ala Gly Val Thr Val Val Ile Val Arg Asp Asp Leu Leu Gly Phe
    50              55                  60
Ala Leu Arg Glu Cys Pro Ser Val Leu Glu Tyr Lys Val Gln Ala Gly
65              70              75                  80
Asn Ser Ser Leu Tyr Asn Thr Pro Pro Cys Phe Ser Ile Tyr Val Met
                85              90              95
Gly Leu Val Leu Glu Trp Ile Lys Asn Asn Gly Gly Ala Ala Ala Met
            100             105             110
Glu Lys Leu Ser Ser Ile Lys Ser Leu Thr Ile Tyr Glu Ile Ile Asp
        115             120             125
Asn Ser Gln Gly Phe Tyr Val Cys Pro Val Glu Pro Gln Asn Arg Ser
    130             135             140
Lys Met Asn Ile Pro Phe Arg Ile Gly Asn Ala Lys Gly Asp Asp Ala
145             150             155             160
Leu Glu Lys Arg Phe Leu Asp Lys Ala Leu Glu Leu Asn Met Leu Ser
            165             170             175
Leu Lys Gly His Arg Ser Val Gly Gly Ile Arg Ala Ser Leu Tyr Asn
            180             185             190
Ala Val Thr Ile Glu Asp Val Gln Lys Leu Ala Ala Phe Met Lys Lys
        195             200             205
Phe Leu Glu Met His Gln Leu
    210             215
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<210> 5907
<211> 1989
<212> DNA
<213> Homo sapiens

<400> 5907

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ttaagagacc aagctaggct cttcctggcc tttaggaaga ggactggcat ggagaaatat
180
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540
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660
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720
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1320
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1560
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1860
tcttgatagg gaaaaaacct taattagcat caatcctgga tggacttgca gctataaata
1920
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1980
aaaaaaaaa
1989

<210> 5908
<211> 454
<212> PRT
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<213> Homo sapiens

<400> 5908
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Leu Cys Phe Pro Ile Ser Leu Gly Ser Gln Ala Ser Gly Gly Glu Ala
             20                  25                 30
Gln Ile Ala Ala Ser Ala Glu Leu Glu Ser Gly Ala Met Pro Trp Ser
         35              40                  45
Leu Leu Gln His Ile Asp Glu Arg Asp Arg Ala Gly Leu Leu Pro Ala
     50              55                  60
Leu Phe Lys Val Leu Ser Val Gly Arg Gly Gly Ser Pro Arg Leu Gln
 65              70                  75                     80
Pro Asp Ser Arg Ala Leu His Tyr Met Lys Lys Leu Tyr Lys Thr Tyr
             85                  90                  95
Ala Thr Lys Glu Gly Ile Pro Lys Ser Asn Arg Ser His Leu Tyr Asn
             100                 105                 110
Thr Val Arg Leu Phe Thr Pro Cys Thr Arg His Lys Gln Ala Pro Gly
             115                 120                 125
Asp Gln Val Thr Gly Ile Leu Pro Ser Val Glu Leu Leu Phe Asn Leu
     130             135                 140
Asp Arg Ile Thr Thr Val Glu His Leu Leu Lys Ser Val Leu Leu Tyr
145             150                 155                     160
Asn Ile Asn Asn Ser Val Ser Phe Ser Ser Ala Val Lys Cys Val Cys
                 165                 170                 175
Asn Leu Met Ile Lys Glu Pro Lys Ser Ser Ser Arg Thr Leu Gly Arg
             180                 185                 190
Ala Pro Tyr Ser Phe Thr Phe Asn Ser Gln Phe Glu Phe Gly Lys Lys
             195                 200                 205
His Lys Trp Ile Gln Ile Asp Val Thr Ser Leu Leu Gln Pro Leu Val
     210                 215                 220
Ala Ser Asn Lys Arg Ser Ile His Met Ser Ile Asn Phe Thr Cys Met
225                 230                 235                 240
Lys Asp Gln Leu Glu His Pro Ser Ala Gln Asn Gly Leu Phe Asn Met
             245                 250                 255
Thr Leu Val Ser Pro Ser Leu Ile Leu Tyr Leu Asn Asp Thr Ser Ala
             260                 265                 270
Gln Ala Tyr His Ser Trp Tyr Ser Leu His Tyr Lys Arg Arg Pro Ser
             275                 280                 285
Gln Gly Pro Asp Gln Glu Arg Ser Leu Ser Ala Tyr Pro Val Gly Glu
     290                 295                 300
Glu Ala Ala Glu Asp Gly Arg Ser Ser His His Arg His Arg Arg Gly
305                 310                 315                 320
Gln Glu Thr Val Ser Ser Glu Leu Lys Lys Pro Leu Gly Pro Ala Ser
             325                 330                 335
Phe Asn Leu Ser Glu Tyr Phe Arg Gln Phe Leu Leu Pro Gln Asn Glu
             340                 345                 350
Cys Glu Leu His Asp Phe Arg Leu Ser Phe Ser Gln Leu Lys Trp Asp
             355                 360                 365
Asn Trp Ile Val Ala Pro His Arg Tyr Asn Pro Arg Tyr Cys Lys Gly
     370                 375                 380
Asp Cys Pro Arg Ala Val Gly His Arg Tyr Gly Ser Pro Val His Thr
385                 390                 395                 400
Met Val Gln Asn Ile Ile Tyr Glu Lys Leu Asp Ser Ser Val Pro Arg
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                    405                410                415
     Pro Ser Cys Val Pro Ala Lys Tyr Ser Pro Leu Ser Val Leu Thr Ile
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               435                440                445
     Thr Lys Cys Thr Cys Arg
          450


     <210> 5909
     <211> 4343
     <212> DNA
     <213> Homo sapiens


     <400> 5909
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     120
     cccaaggatc cgccggggaa caagccacag gagagcgact caggaacaag tgtgggagag
     180
     gaagcggcgg cggcggcgcc gggcccgggg gtggtgacag caggtctgag gttgcatcat
     240
     aaatacaaag gactgaagtt ataaaagaga aagagaagt ttgctgctaa aatgaatctg
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     360
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     420
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     480
     cctgaggaac tttttattgg tttgcatgaa attggacatg gaagttttgg agcagtttat
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     aagcatccta atactattga gtacaaaggc tgttacttga agaacacac tgcttggttg
     720
     gtgatggaat attgcttagg ctcagcctct gatttattag aagttcataa aaaaccactt
     780
     caggaagtgg agatcgctgc cattactcat ggagccttgc atggactagc ctacctacat
     840
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     900
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     960
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     1020
     gggaaagttg atatttggtc acttggcatc acttgtattg aattggcgga acggaagccg
     1080
     cccctttca acatgaatgc aatgagtgcc ttatatcaca ttgcccagaa tgactcccca
     1140
     acgttacagt ctaatgaatg gacagactcc tttaggagat ttgttgatta ctgcttgcag
     1200
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aaaatacctc aggaaaggcc aacatcagca gaactattaa ggcatgactt tgttcgacga
1260

gaccggccac tacgtgtcct cattgacctc atacagagga caaaagatgc agttcgtgag
1320

ctagataacc tacagtaccg aaaaatgaaa aaaatacttt tccaagagac acggaatgga
1380

cccttgaatg agtcacagga ggatgaggaa gacagtgaac atggaaccag cctgaacagg
1440

gaaatggaca gcctgggcag caaccattcc attccaagca tgtccgtgag cacaggcagc
1500

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1560

atgatgcacg atgacgaaag cacaatcaat tccagctcct ccgtcgtgca taagaaagat
1620

catgtattca taagggatga ggcgggccac ggcgatccca ggcctgagcc gcggcctacc
1680

cagtcagttc agagccaggc cctccactac cggaacagag agcgctttgc cacgatcaaa
1740

tcagcatctt tggttacacg acagatccat gagcatgagc aggagaacga gttgcgggaa
1800

cagatgtcag gttataagcg gatgcggcgc cagcaccaga agcagctgat cgccctggag
1860

aacaagctga aggctgagat ggacgagcac cgcctcaagc tacagaagga ggtggagacg
1920

catgccaaca actcgtccat cgagctggag aagctggcca agaagcaagt ggctatcata
1980

gaaaaggagg caaaggtagc tgcagcagat gagaagaagt tccagcaaca gatcttggcc
2040

cagcagaaga aagatttgac aactttctta gaaagtcaga agaagcagta taagatttgt
2100

aaggaaaaaa taaaagagga aatgaatgag gaccatagca cacccaagaa agagaagcaa
2160

gagcggatct tcaaacataa agagaacttg caacacacac aggctgaaga ggaagcccac
2220

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2280

ataatgatca agcggcacga ggtggagcag cagaacattc gggaggaact aaataaaaag
2340

aggaccatga aggagatgga gcatgccatg ctaatccggc acgacgagtc cacccgagag
2400

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2460

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2520

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2580

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2640

aatcaccagt tggaagttac tccaaagaat gagcacaaaa caatcttaaa gacactgaaa
2700

gatgagcaga caagaaaact tgccattttg gcagagcagt atgaacagag tataaatgaa
2760

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2820

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2880
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2940
agagcacacc ttgagcagaa gattgaagag gagctggctg cccttcagaa ggaacgcagc
3000
gagagaataa agaacctatt ggaaaggcaa gagcgagaga ttgaaacttt tgacatggag
3060
agcctcagaa tgggatttgg gaatttggtt acattagatt ttcctaagga ggactacaga
3120
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3180
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3240
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3300
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3360
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3420
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3480
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3540
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3600
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3660
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3720
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3780
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3840
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3900
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3960
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4020
cctccctcct tttccagttc agtatttgga gttcaacact gtctctcaat cagatcatct
4080
tgatcttttt ctttatctcc cttcccctc ctaagtccca tttcttggtc ataaatattg
4140
cattattcac actttcaaac tgtgtatttt cttacaataa aaaatgatga aaaaaaaaa
4200
ggctttactt cttttgcatg cactttaaaa acaaaacaaa acattttca ggttccaagg
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4343
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<210> 5910

<211> 899
<212> PRT
<213> Homo sapiens

<400> 5910
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Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
            20   25   30
Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
        35   40   45
Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
    50   55   60
Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
65   70   75   80
His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
                85   90   95
Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
            100   105   110
Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
        115   120   125
His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
    130   135   140
His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr Glu Pro Gly Gln
145   150   155   160
Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn
                165   170   175
Ser Phe Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Leu Ala
            180   185   190
Met Asp Glu Gly Gln Tyr Asp Gly Lys Val Asp Ile Trp Ser Leu Gly
        195   200   205
Ile Thr Cys Ile Glu Leu Ala Glu Arg Lys Pro Pro Leu Phe Asn Met
    210   215   220
Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Asp Ser Pro Thr
225   230   235   240
Leu Gln Ser Asn Glu Trp Thr Asp Ser Phe Arg Arg Phe Val Asp Tyr
                245   250   255
Cys Leu Gln Lys Ile Pro Gln Glu Arg Pro Thr Ser Ala Glu Leu Leu
            260   265   270
Arg His Asp Phe Val Arg Arg Asp Arg Pro Leu Arg Val Leu Ile Asp
        275   280   285
Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln
    290   295   300
Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Thr Arg Asn Gly Pro
305   310   315   320
Leu Asn Glu Ser Gln Glu Asp Glu Glu Asp Ser Glu His Gly Thr Ser
                325   330   335
Leu Asn Arg Glu Met Asp Ser Leu Gly Ser Asn His Ser Ile Pro Ser
            340   345   350
Met Ser Val Ser Thr Gly Ser Gln Ser Ser Ser Val Asn Ser Met Gln
        355   360   365
Glu Val Met Asp Glu Ser Ser Ser Glu Leu Val Met Met His Asp Asp
    370   375   380
Glu Ser Thr Ile Asn Ser Ser Ser Ser Val Val His Lys Lys Asp His

```
385                     390                    395                     400
Val Phe Ile Arg Asp Glu Ala Gly His Gly Asp Pro Arg Pro Glu Pro
                405                    410                    415
Arg Pro Thr Gln Ser Val Gln Ser Gln Ala Leu His Tyr Arg Asn Arg
                420                    425                    430
Glu Arg Phe Ala Thr Ile Lys Ser Ala Ser Leu Val Thr Arg Gln Ile
            435                    440                    445
His Glu His Glu Gln Glu Asn Glu Leu Arg Glu Gln Met Ser Gly Tyr
        450                    455                    460
Lys Arg Met Arg Arg Gln His Gln Lys Gln Leu Ile Ala Leu Glu Asn
465                    470                    475                    480
Lys Leu Lys Ala Glu Met Asp Glu His Arg Leu Lys Leu Gln Lys Glu
                485                    490                    495
Val Glu Thr His Ala Asn Asn Ser Ser Ile Glu Leu Glu Lys Leu Ala
            500                    505                    510
Lys Lys Gln Val Ala Ile Ile Glu Lys Glu Ala Lys Val Ala Ala Ala
        515                    520                    525
Asp Glu Lys Lys Phe Gln Gln Gln Ile Leu Ala Gln Gln Lys Lys Asp
        530                    535                    540
Leu Thr Thr Phe Leu Glu Ser Gln Lys Lys Gln Tyr Lys Ile Cys Lys
545                    550                    555                    560
Glu Lys Ile Lys Glu Glu Met Asn Glu Asp His Ser Thr Pro Lys Lys
                565                    570                    575
Glu Lys Gln Glu Arg Ile Phe Lys His Lys Glu Asn Leu Gln His Thr
            580                    585                    590
Gln Ala Glu Glu Glu Ala His Leu Leu Thr Ser Thr Gly Asp Trp Thr
        595                    600                    605
Thr Thr Lys Asn Cys Arg Phe Phe Lys Arg Lys Ile Met Ile Lys Arg
    610                    615                    620
His Glu Val Glu Gln Gln Asn Ile Arg Glu Glu Leu Asn Lys Lys Arg
625                    630                    635                    640
Thr Met Lys Glu Met Glu His Ala Met Leu Ile Arg His Asp Glu Ser
                645                    650                    655
Thr Arg Glu Leu Glu Tyr Arg Gln Leu His Thr Leu Gln Lys Leu Arg
            660                    665                    670
Met Asp Leu Ile Arg Leu Gln His Gln Thr Glu Leu Glu Asn Gln Leu
        675                    680                    685
Glu Tyr Asn Lys Arg Arg Glu Arg Glu Leu His Arg Lys His Val Met
        690                    695                    700
Glu Leu Arg Gln Gln Pro Lys Asn Leu Lys Ala Met Glu Met Gln Ile
705                    710                    715                    720
Lys Lys Gln Phe Gln Asp Thr Cys Lys Val Gln Thr Lys Gln Tyr Lys
                725                    730                    735
Ala Leu Lys Asn His Gln Leu Glu Val Thr Pro Lys Asn Glu His Lys
            740                    745                    750
Thr Ile Leu Lys Thr Leu Lys Asp Glu Gln Thr Arg Lys Leu Ala Ile
        755                    760                    765
Leu Ala Glu Gln Tyr Glu Gln Ser Ile Asn Glu Met Met Ala Ser Gln
    770                    775                    780
Ala Leu Arg Leu Asp Glu Ala Gln Glu Ala Glu Cys Gln Ala Leu Arg
785                    790                    795                    800
Leu Gln Leu Gln Gln Glu Met Glu Leu Leu Asn Ala Tyr Gln Ser Lys
                805                    810                    815
Ile Lys Met Gln Thr Glu Ala Gln His Glu Arg Glu Leu Gln Lys Leu
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                    820                     825                     830
    Glu Gln Arg Val Ser Leu Arg Arg Ala His Leu Glu Gln Lys Ile Glu
                835                     840                     845
    Glu Glu Leu Ala Ala Leu Gln Lys Glu Arg Ser Glu Arg Ile Lys Asn
            850                     855                     860
    Leu Leu Glu Arg Gln Glu Arg Glu Ile Glu Thr Phe Asp Met Glu Ser
    865                     870                     875                     880
    Leu Arg Met Gly Phe Gly Asn Leu Val Thr Leu Asp Phe Pro Lys Glu
                    885                     890                     895
    Asp Tyr Arg
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```
<210> 5911
<211> 645
<212> DNA
<213> Homo sapiens

<400> 5911
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tgtagaccgg agctgttcct attcggcaat cttggctctt ccgcagagga tctcattttg
120
cccgacggtg gtactccagc aggtacttca agtccagctt cttcatcttc ccttctcaac
180
agacttcagc ttgatgatga tattgatggt gagactagag atctcttcgt tatagtcgat
240
gatcccaaga agcatgtgtg tacaatggag acttacatca cctataggat caccaccaaa
300
agtactcggg tggagtttga cctgccagaa tattctgttc gtcgaagata ccaggatttt
360
gactggttga ggagcaaact ggaagaatcc cagcccactc atctcattcc ccctcttccc
420
gagaagtttg tggtaaaagg tgttgtggat cgttttcag aagagtttgt ggagaccaga
480
agaaaagctt tggataaatt tctaaaaaga attacggacc atcctgtgct gtctttcaat
540
gaacacttta atattttcct tactgctaag gacctgaacg cctacaagaa gcaagggata
600
gcattgctga ccagaatggg cgagtcagtc aagcacgtca cgcgt
645
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<210> 5912
<211> 211
<212> PRT
<213> Homo sapiens

<400> 5912
Asp Gly Lys Pro Glu Ile Pro Val Leu Cys Phe Ala His Ala Gly Ser
1               5                   10                  15
Cys Arg Pro Glu Leu Phe Leu Phe Gly Asn Leu Gly Ser Ser Ala Glu
                20                  25                  30
Asp Leu Ile Leu Pro Asp Gly Gly Thr Pro Ala Gly Thr Ser Ser Pro
            35                  40                  45
Ala Ser Ser Ser Ser Leu Leu Asn Arg Leu Gln Leu Asp Asp Asp Ile
```

```
        50                      55                      60
Asp Gly Glu Thr Arg Asp Leu Phe Val Ile Val Asp Asp Pro Lys Lys
65                      70                      75                      80
His Val Cys Thr Met Glu Thr Tyr Ile Thr Tyr Arg Ile Thr Thr Lys
                85                      90                      95
Ser Thr Arg Val Glu Phe Asp Leu Pro Glu Tyr Ser Val Arg Arg Arg
            100                     105                     110
Tyr Gln Asp Phe Asp Trp Leu Arg Ser Lys Leu Glu Glu Ser Gln Pro
        115                     120                     125
Thr His Leu Ile Pro Pro Leu Pro Glu Lys Phe Val Val Lys Gly Val
        130                     135                     140
Val Asp Arg Phe Ser Glu Gln Phe Val Glu Thr Arg Arg Lys Ala Leu
145                     150                     155                     160
Asp Lys Phe Leu Lys Arg Ile Thr Asp His Pro Val Leu Ser Phe Asn
                165                     170                     175
Glu His Phe Asn Ile Phe Leu Thr Ala Lys Asp Leu Asn Ala Tyr Lys
            180                     185                     190
Lys Gln Gly Ile Ala Leu Leu Thr Arg Met Gly Glu Ser Val Lys His
        195                     200                     205
Val Thr Arg
    210
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<210> 5913
<211> 2495
<212> DNA
<213> Homo sapiens
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<400> 5913
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cattttatag ggagaaaacc aagccactgg ccccgttaca cagcaagtta gtagtaagac
120
tgagattcga accctggtca aacagacttt ccattttgtt ccactgactc agtcttctct
180
tttacacttg aatcagactt ttagttttat tgtagttttt gagtccatag ctgtcttcct
240
gtactgtctt gactctttga ctaaactgat ttcacatctt taaaattatg ctttcctttt
300
aggctcattt ttagctcagc tgttgacagc tatttttaaa tgtaacatga cataatatat
360
ttcctaaata atttaaaata atctagcttg agctgctctg aaggttagtc agttggtggt
420
gtgcatagag gtagagcctt cccccactct caaggatgct gtgaggggta ttcctaccat
480
gtggtgagtt gggaggtttt cctgaggtcc ttttccatcc tgagactctg gttttccatt
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600
gcanaaggga tcatcttgcc tgagctctac ctggaccctg catacgggca gataaaccac
660
aatgtcctgt ccacgagcac actgagcagc ccagcagtga accnttgtag gtttgcccct
720
gtggtctctg atgcttttgg tgttgggtat gctgttcatg acaactggat aggctgcaat
780
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gtctcttcct acccaggccg caatgcccgg gagtttctcc aatgtgtgga gaaggctnta
840

gaagacatgt ttgatgcctt agaaggcaaa tccatcaaaa gttaacttct gggcagatga
900

aaagctacca tcacttcctc atcatgaaaa ctgggaggcc gggcatggtg gctcatgcct
960

gtaatcccag cattttgaga ggctgaggcg ggtggatcac ttgaggtcag gagtttgaga
1020

ccaacctggc caacatggtg aaaccttgtc tctactaaaa atacaaaaat tagctgggtg
1080

tggtggcatg tgcctataat cccagctact tgggaggttg aagcagaatt gcttgaaccc
1140

aggaggtgga ggttgcagtg agctgagatc acaccactgc actccggcct gggcgacaga
1200

gcgagactgt ctcaaaaaaa caaaaaagaa aaaaaactg gggcctgtgt agccagtggg
1260

tgctattctg tgaaactaat cataagctgc ctaggcagcc agctacaggc ttgagcttta
1320

aattcatggt tttaaagcta aacgtaattt ccacttggga ctagatcaca actgaagata
1380

acaagagatt taagttttaa gggcatttaa tcaggaggaa aggtttggaa aactaactca
1440

ggtgtattta ttgtttaagc agaaataaag tttaattttt gcttgaagat ggttcctaat
1500

ttcttttaac ctaattccta atcctcacaa agatctttcc aacagcaagt tcagtaagtt
1560

caggtaacag tacgtcacca ttggcttctg gctcattgag tgatggtggg atcgcggttt
1620

catctctgta aacttgccct tgactgggga gataccatct ccttaaaaat actcttcatt
1680

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1740

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1800

agctgtaata aagtccagca tgcagattgt gaaggtttcg tatagccacc aggagacaag
1860

ggtcaaagga acgagcctct gtgggctctg ctgcttagag tactttgtcc tttctcagtt
1920

cttaagggca actgggaagg aagagggatc agcacttcac aaactggtgg gtgacctcat
1980

agattcccac agactcctgg gccttttcat catagtcagt ccagtccttc tcctgcagat
2040

taatgtcact gaaggctgtc cctgactcca caccttcagc agcaaaccca gcctgcggct
2100

ggaaatcaac tggttcaagg ccccggcact caaactccac tattgtcttg aagttctcat
2160

tgtcttcagc attgtaaggc ttgatggtgc tgcttaaaat ctcgatggaa ttttctcttg
2220

cacacagctt gcacttctgg accatggaag cactgccacg gcccccttc agtgccacac
2280

tgtccatcag ccggatgtac tgccacttgt ccgaaatctc accacagttg ccacatttca
2340

tcttcaggta ccaccggaag tcctcgccca cgggccggag gttggtgatg ttctccagcg
2400

5090

tggctttgag ttgcagcgcg attttcccca tggtagccct ctccgcccgg tgctggctgc
2460
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2495

<210> 5914
<211> 158
<212> PRT
<213> Homo sapiens

<400> 5914
Ser Val Gly Gly Val His Arg Gly Arg Ala Phe Pro His Ser Gln Gly
1   5   10   15
Cys Cys Glu Gly Tyr Ser Tyr His Val Val Ser Trp Glu Val Phe Leu
                20   25   30
Arg Ser Phe Ser Ile Leu Arg Leu Trp Phe Ser Ile Leu Phe Leu Thr
            35   40   45
Gly Gln Gly Phe Asp Arg His Leu Phe Ala Leu Arg His Leu Ala Ala
        50   55   60
Ala Xaa Gly Ile Ile Leu Pro Glu Leu Tyr Leu Asp Pro Ala Tyr Gly
65   70   75   80
Gln Ile Asn His Asn Val Leu Ser Thr Ser Thr Leu Ser Ser Pro Ala
                85   90   95
Val Asn Xaa Cys Arg Phe Ala Pro Val Val Ser Asp Ala Phe Gly Val
            100   105   110
Gly Tyr Ala Val His Asp Asn Trp Ile Gly Cys Asn Val Ser Ser Tyr
        115   120   125
Pro Gly Arg Asn Ala Arg Glu Phe Leu Gln Cys Val Glu Lys Ala Xaa
        130   135   140
Glu Asp Met Phe Asp Ala Leu Glu Gly Lys Ser Ile Lys Ser
145   150   155

<210> 5915
<211> 457
<212> DNA
<213> Homo sapiens

<400> 5915
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gaaatggtac agcggattct cttgtcaaca cgaggttatg tcaacttcgt gaatgaagta
120
tttcaccagg cattttttgtt gccttcctgt gagatagctg taacaagaaa agtagttcaa
180
gtgtacagaa agtggattct ccaggacaaa cctgtgttca tggaggagcc agatagaaaa
240
gatgttgccc aagaagatgc tgaaaaatta ggattttccg agactgatag caaggaggcc
300
tcatctgaaa gttctggtca taaacgatct tccagttggg gacgcacata ctccttcaca
360
agtgcaatga gcagagggtg tgtgacagag gaggaaaata caaatgtgaa agccggcgtc
420
caggctttgt tgcaggtatt tttggcgaac tctgcag
457

5091

<210> 5916
<211> 152
<212> PRT
<213> Homo sapiens

<400> 5916
Tyr Arg Arg Leu Ser Asn Ser Ser Leu Cys Ser Ile Glu Glu Glu His
 1   5   10   15
Arg Met Val Tyr Glu Met Val Gln Arg Ile Leu Leu Ser Thr Arg Gly
             20   25   30
Tyr Val Asn Phe Val Asn Glu Val Phe His Gln Ala Phe Leu Leu Pro
         35   40   45
Ser Cys Glu Ile Ala Val Thr Arg Lys Val Val Gln Val Tyr Arg Lys
     50   55   60
Trp Ile Leu Gln Asp Lys Pro Val Phe Met Glu Glu Pro Asp Arg Lys
65   70   75   80
Asp Val Ala Gln Glu Asp Ala Glu Lys Leu Gly Phe Ser Glu Thr Asp
             85   90   95
Ser Lys Glu Ala Ser Ser Glu Ser Ser Gly His Lys Arg Ser Ser Ser
             100   105   110
Trp Gly Arg Thr Tyr Ser Phe Thr Ser Ala Met Ser Arg Gly Cys Val
         115   120   125
Thr Glu Glu Glu Asn Thr Asn Val Lys Ala Gly Val Gln Ala Leu Leu
     130   135   140
Gln Val Phe Leu Ala Asn Ser Ala
145   150

<210> 5917
<211> 3727
<212> DNA
<213> Homo sapiens

<400> 5917
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60
atcgagaagt tcaatcacgt cagcggcagc cggggggtccg agagcccccg ccccaacccg
120
ccccatgccg cgcgccacag ggagccagga cctgtgcgca ggcccatgcg caagtccttc
180
tcccagcccg gcctgcgctc gctggccttt aggaaggagc tgcaggatgg gggcctccga
240
agcagcggct tcttcagctc cttcgaggag agcgacattg agaaccacct cattagcgga
300
cacaatattg tgcagcccac agatatcgag gaaaatcgaa ctatgctctt cacgattggc
360
cagtctgaag tttacctcat cagtcctgac accaaaaaaa tagcattgga gaaaaatttt
420
aaggagatat ccttttgctc tcagggcatc agacacgtgg accactttgg gtttatctgt
480
cgggagtctt ccggaggtgg cggctttcat tttgtctgtt acgtgtttca gtgcacaaat
540
gaggctctgg ttgatgaaat tatgatgacc ctgaaacagg ccttcacggt ggccgcagtg
600

5092

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cagcagacag ctaaggcgcc agcccagctg tgtgagggct gccccctgca aagcctgcac
660
aagctctgtg agaggataga gggaatgaat tcttccaaaa caaaactaga actgcaaaag
720
cacctgacga cattaaccaa tcaggagcag gcgactattt ttgaagaggt tcagaaattg
780
agaccgagaa atgagcagcg agagaatgaa ttgattattt cttttctgag atgtttatat
840
gaagagaaac agaaagaaca catccatatt ggggagatga agcagacatc gcagatggca
900
gcagagaata ttggaagtga attaccaccc agtgccactc gatttaggct agatatgctg
960
aaaaacaaag caaagagatc tttaacagag tctttagaaa gtattttgtc ccggggtaat
1020
aaagccagag gcctgcagga acactccatc agtgtggatc tggatagctc cctgtctagt
1080
acattaagta acaccagcaa agagccatct gtgtgtgaaa aggaggcctt gcccatctct
1140
gagagctcct ttaagctcct cggctcctcg gaggacctgt ccagtgactc ggagagtcat
1200
ctcccagaag agccagctcc gctgtcgccc cagcaggcct tcaggaggcg agcaaacacc
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1320
gtttcgcaaa ggaaacttat gaggtatcac tcagtgagca cagagacgcc tcatgaacga
1380
aaggactttg aatccaaagc aaaccatctt ggtgattctg gtgggactcc tgtgaagacc
1440
cggaggcatt cctggaggca gcagatattc ctccgagtag ccaccccgca gaaggcgtgc
1500
gattcttcca gcagatatga agattattca gagctgggag agcttccccc acgatctcct
1560
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5093

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<210> 5918
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<211> 981
<212> PRT
<213> Homo sapiens

<400> 5918

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Ser Glu Ser Pro Arg Pro Asn Pro Pro His Ala Ala Arg His Arg Glu
            35                  40                  45
Pro Gly Pro Val Arg Arg Pro Met Arg Lys Ser Phe Ser Gln Pro Gly
        50                  55                  60
Leu Arg Ser Leu Ala Phe Arg Lys Glu Leu Gln Asp Gly Gly Leu Arg
65                  70                  75                  80
Ser Ser Gly Phe Phe Ser Ser Phe Glu Glu Ser Asp Ile Glu Asn His
                85                  90                  95
Leu Ile Ser Gly His Asn Ile Val Gln Pro Thr Asp Ile Glu Glu Asn
            100                 105                 110
Arg Thr Met Leu Phe Thr Ile Gly Gln Ser Glu Val Tyr Leu Ile Ser
        115                 120                 125
Pro Asp Thr Lys Lys Ile Ala Leu Glu Lys Asn Phe Lys Glu Ile Ser
        130                 135                 140
Phe Cys Ser Gln Gly Ile Arg His Val Asp His Phe Gly Phe Ile Cys
145                 150                 155                 160
Arg Glu Ser Ser Gly Gly Gly Phe His Phe Val Cys Tyr Val Phe
                165                 170                 175
Gln Cys Thr Asn Glu Ala Leu Val Asp Glu Ile Met Met Thr Leu Lys
            180                 185                 190
Gln Ala Phe Thr Val Ala Ala Val Gln Gln Thr Ala Lys Ala Pro Ala
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Gln Leu Cys Glu Gly Cys Pro Leu Gln Ser Leu His Lys Leu Cys Glu
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Arg Ile Glu Gly Met Asn Ser Ser Lys Thr Lys Leu Glu Leu Gln Lys
225                 230                 235                 240
His Leu Thr Thr Leu Thr Asn Gln Glu Gln Ala Thr Ile Phe Glu Glu
                245                 250                 255
Val Gln Lys Leu Arg Pro Arg Asn Glu Gln Arg Glu Asn Glu Leu Ile
            260                 265                 270
Ile Ser Phe Leu Arg Cys Leu Tyr Glu Glu Lys Gln Lys Glu His Ile
        275                 280                 285
His Ile Gly Glu Met Lys Gln Thr Ser Gln Met Ala Ala Glu Asn Ile
    290                 295                 300
Gly Ser Glu Leu Pro Pro Ser Ala Thr Arg Phe Arg Leu Asp Met Leu
305                 310                 315                 320
Lys Asn Lys Ala Lys Arg Ser Leu Thr Glu Ser Leu Glu Ser Ile Leu
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Ser Arg Gly Asn Lys Ala Arg Gly Leu Gln Glu His Ser Ile Ser Val
        340                 345                 350
Asp Leu Asp Ser Ser Leu Ser Ser Thr Leu Ser Asn Thr Ser Lys Glu
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Pro Ser Val Cys Glu Lys Glu Ala Leu Pro Ile Ser Glu Ser Ser Phe
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Lys Leu Leu Gly Ser Ser Glu Asp Leu Ser Ser Asp Ser Glu Ser His
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Gln Pro Ala Arg Gly Ser Pro Gly Val Ser Gln Arg Lys Leu Met Arg
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Tyr His Ser Val Ser Thr Glu Thr Pro His Glu Arg Lys Asp Phe Glu
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Ser Lys Ala Asn His Leu Gly Asp Ser Gly Gly Thr Pro Val Lys Thr
465                     470                     475                     480
Arg Arg His Ser Trp Arg Gln Gln Ile Phe Leu Arg Val Ala Thr Pro
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Gln Lys Ala Cys Asp Ser Ser Ser Arg Tyr Glu Asp Tyr Ser Glu Leu
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Gly Glu Leu Pro Pro Arg Ser Pro Leu Glu Pro Val Cys Glu Asp Gly
        515                     520                     525
Pro Phe Gly Pro His Gln Arg Lys Arg Lys Gly His Leu Val Ser Ser
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Glu Ser Cys Gly Lys Gly Leu Phe Phe Asn Arg Tyr Cys Xaa Leu Arg
545                     550                     555                     560
Met Glu Lys Glu Asn Gln Lys Leu Gln Ala Ser Glu Asn Asp Leu Leu
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Asn Lys Arg Leu Lys Leu Asp Tyr Glu Glu Ile Thr Pro Cys Leu Lys
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Glu Val Thr Thr Val Trp Glu Lys Met Leu Ser Thr Pro Gly Arg Ser
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Lys Ile Lys Phe Asp Met Glu Lys Met His Ser Ala Val Gly Gln Gly
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Val Pro Arg His His Arg Gly Glu Ile Trp Lys Phe Leu Ala Glu Gln
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Phe His Leu Lys His Gln Phe Pro Ser Lys Gln Gln Pro Lys Asp Val
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Pro Tyr Lys Glu Leu Leu Lys Gln Leu Thr Ser Gln Gln His Ala Ile
        660                     665                     670
Leu Ile Asp Leu Gly Arg Thr Phe Pro Thr His Pro Tyr Phe Ser Ala
        675                     680                     685
Gln Leu Gly Ala Gly Gln Leu Ser Leu Tyr Asn Ile Leu Lys Ala Tyr
    690                     695                     700
Ser Leu Leu Asp Gln Glu Val Gly Tyr Cys Gln Gly Leu Ser Phe Val
705                     710                     715                     720
Ala Gly Ile Leu Leu Leu His Met Ser Glu Glu Glu Ala Phe Lys Met
            725                     730                     735
Leu Lys Phe Leu Met Phe Asp Met Gly Leu Arg Lys Gln Tyr Arg Pro
        740                     745                     750
Asp Met Ile Ile Leu Gln Ile Gln Met Tyr Gln Leu Ser Arg Leu Leu
    755                     760                     765
His Asp Tyr His Arg Asp Leu Tyr Asn His Leu Glu Glu His Glu Ile
    770                     775                     780
Gly Pro Ser Leu Tyr Ala Ala Pro Trp Phe Leu Thr Met Phe Ala Ser
785                     790                     795                     800
Gln Phe Pro Leu Gly Phe Val Ala Arg Val Phe Asp Met Ile Phe Leu
        805                     810                     815
Gln Gly Thr Glu Val Ile Phe Lys Val Ala Leu Ser Leu Leu Gly Ser
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              820                    825                    830
His Lys Pro Leu Ile Leu Gln His Glu Asn Leu Glu Thr Ile Val Asp
          835                    840                    845
Phe Ile Lys Ser Thr Leu Pro Asn Leu Gly Leu Val Gln Met Glu Lys
      850                    855                    860
Thr Ile Asn Gln Val Phe Glu Met Asp Ile Ala Lys Gln Leu Gln Ala
865                    870                    875                    880
Tyr Glu Val Glu Tyr His Val Leu Gln Glu Glu Leu Ile Asp Ser Ser
                  885                    890                    895
Pro Leu Ser Asp Asn Gln Arg Met Asp Lys Leu Glu Lys Thr Asn Ser
              900                    905                    910
Ser Leu Arg Lys Gln Asn Leu Asp Leu Leu Glu Gln Leu Gln Val Ala
          915                    920                    925
Asn Gly Arg Ile Gln Ser Leu Glu Ala Thr Ile Glu Lys Leu Leu Ser
        930                    935                    940
Ser Glu Ser Lys Leu Lys Gln Ala Met Leu Thr Leu Glu Leu Glu Arg
945                    950                    955                    960
Ser Pro Ala Ala Asp Gly Gly Gly Ala Ala Ala Ala Glu Arg Arg Ala
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Gln Arg Pro Gly Ala
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<210> 5919
<211> 1320
<212> DNA
<213> Homo sapiens

<400> 5919
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120
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180
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240
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300
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360
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420
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780
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900

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1080

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<210> 5920
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<212> PRT
<213> Homo sapiens

<400> 5920
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            20   25   30
Gly Val Gly Pro Trp Arg Gly Trp Lys Thr Thr Trp His Leu Gly Gly
        35   40   45
Gly Ala Thr Gly Ser Gly Arg Ala Trp Ala Ala Glu Lys Phe Arg Gly
    50   55   60
Leu Gln Glu Arg Ala Glu Arg Val Pro Pro Arg Ser Cys Glu Arg His
65   70   75   80
Ser Val Gly Thr Lys Ser Gly Ala Gly Ala Leu Ile Ala
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<210> 5921
<211> 4130
<212> DNA
<213> Homo sapiens

<400> 5921
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180

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240

cagaagtctg tctccaaaca caaatcaagc agcaagatca tctgctgcag ctggacaaat
300

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<210> 5922
<211> 1252
<212> PRT
<213> Homo sapiens

<400> 5922

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Lys Ser Val Ile Ile Trp Thr Ser Lys Leu Glu Gly Ile Leu Lys Tyr
        35                  40                  45
Thr His Asn Asp Ala Ile Gln Cys Val Ser Tyr Asn Pro Ile Thr His
        50                  55                  60
Gln Leu Ala Ser Cys Ser Ser Ser Asp Phe Gly Leu Trp Ser Pro Glu
65                  70                  75                  80
Gln Lys Ser Val Ser Lys His Lys Ser Ser Ser Lys Ile Ile Cys Cys
                85                  90                  95
Ser Trp Thr Asn Asp Gly Gln Tyr Leu Ala Leu Gly Met Phe Asn Gly
                100                 105                 110
Ile Ile Ser Ile Arg Asn Lys Asn Gly Glu Glu Lys Val Lys Ile Glu
            115                 120                 125
Arg Pro Gly Gly Ser Leu Ser Pro Ile Trp Ser Ile Cys Trp Asn Pro
        130                 135                 140
Ser Ser Arg Trp Glu Ser Phe Trp Met Asn Arg Glu Asn Glu Asp Ala
145                 150                 155                 160
Glu Asp Val Ile Val Asn Arg Tyr Ile Gln Glu Ile Pro Ser Thr Leu
                165                 170                 175
Lys Ser Ala Val Tyr Ser Ser Gln Gly Ser Glu Ala Glu Glu Glu Glu
                180                 185                 190
Pro Glu Glu Glu Asp Asp Ser Pro Arg Asp Asp Asn Leu Glu Glu Arg
            195                 200                 205
Asn Asp Ile Leu Ala Val Ala Asp Trp Gly Gln Lys Val Ser Phe Tyr
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5101

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Gln Leu Ser Gly Lys Gln Ile Gly Lys Asp Arg Ala Leu Asn Phe Asp
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Gly Ser Asp Lys Gln Val Ser Leu Phe Thr Lys Asp Gly Val Arg Leu
                    260                      265                      270
Gly Thr Val Gly Glu Gln Asn Ser Trp Val Trp Thr Cys Gln Ala Lys
                    275                      280                      285
Pro Asp Ser Asn Tyr Val Val Val Gly Cys Gln Asp Gly Thr Ile Ser
                    290                      295                      300
Phe Tyr Gln Leu Ile Phe Ser Thr Val His Gly Leu Tyr Lys Asp Arg
305                      310                      315                      320
Tyr Ala Tyr Arg Asp Ser Met Thr Asp Val Ile Val Gln His Leu Ile
                    325                      330                      335
Thr Glu Gln Lys Val Arg Ile Lys Cys Lys Glu Leu Val Lys Lys Ile
                    340                      345                      350
Ala Ile Tyr Arg Asn Arg Leu Ala Ile Gln Leu Pro Glu Lys Ile Leu
                    355                      360                      365
Ile Tyr Glu Leu Tyr Ser Glu Asp Leu Ser Asp Met His Tyr Arg Val
                    370                      375                      380
Lys Glu Lys Ile Ile Lys Lys Phe Glu Cys Asn Leu Leu Val Val Cys
385                      390                      395                      400
Ala Asn His Ile Ile Leu Cys Gln Glu Lys Arg Leu Gln Cys Leu Ser
                    405                      410                      415
Phe Ser Gly Val Lys Glu Arg Glu Trp Gln Met Glu Ser Leu Ile Arg
                    420                      425                      430
Tyr Ile Lys Val Ile Gly Gly Pro Pro Gly Arg Glu Gly Leu Leu Val
                    435                      440                      445
Gly Leu Lys Asn Gly Gln Ile Leu Lys Ile Phe Val Asp Asn Leu Phe
        450                      455                      460
Ala Ile Val Leu Leu Lys Gln Ala Thr Ala Val Arg Cys Leu Asp Met
465                      470                      475                      480
Ser Ala Ser Arg Lys Lys Leu Ala Val Val Asp Glu Asn Asp Thr Cys
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Leu Val Tyr Asp Ile Asp Thr Lys Glu Leu Leu Phe Gln Glu Pro Asn
                    500                      505                      510
Ala Asn Ser Val Ala Trp Asn Thr Gln Cys Glu Asp Met Leu Cys Phe
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Ser Gly Gly Gly Tyr Leu Asn Ile Lys Ala Ser Thr Phe Pro Val His
        530                      535                      540
Arg Gln Lys Leu Gln Gly Phe Val Val Gly Tyr Asn Gly Ser Lys Ile
545                      550                      555                      560
Phe Cys Leu His Val Phe Ser Ile Ser Ala Val Glu Val Pro Gln Ser
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Ala Pro Met Tyr Gln Tyr Leu Asp Arg Lys Leu Phe Lys Glu Ala Tyr
                    580                      585                      590
Gln Ile Ala Cys Leu Gly Val Thr Asp Thr Asp Trp Arg Glu Leu Ala
                    595                      600                      605
Met Glu Ala Leu Glu Gly Leu Asp Phe Glu Thr Ala Lys Lys Ala Phe
        610                      615                      620
Ile Arg Val Gln Asp Leu Arg Tyr Leu Glu Leu Ile Ser Ser Ile Glu
625                      630                      635                      640
Glu Arg Lys Lys Arg Gly Glu Thr Asn Asn Asp Leu Phe Leu Ala Asp
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Val Phe Ser Tyr Gln Gly Lys Phe His Glu Ala Ala Lys Leu Tyr Lys
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Arg Ser Gly His Glu Asn Leu Ala Leu Glu Met Tyr Thr Asp Leu Cys
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Thr Lys Met Leu Ile Thr Lys Gln Ala Asp Trp Ala Arg Asn Ile Lys
705                   710                   715                   720
Glu Pro Lys Ala Ala Val Glu Met Tyr Ile Ser Ala Gly Glu His Val
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Lys Ala Ile Glu Ile Cys Gly Asp His Gly Trp Val Asp Met Leu Ile
                740                   745                   750
Asp Ile Ala Arg Lys Leu Asp Lys Ala Glu Arg Glu Pro Leu Leu Leu
            755                   760                   765
Cys Ala Thr Tyr Leu Lys Lys Leu Asp Ser Pro Gly Tyr Ala Ala Glu
            770                   775                   780
Thr Tyr Leu Lys Met Gly Asp Leu Lys Ser Leu Val Gln Leu His Val
785                   790                   795                   800
Glu Thr Gln Arg Trp Asp Glu Ala Phe Ala Leu Gly Glu Lys His Pro
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Glu Phe Lys Asp Asp Ile Tyr Met Pro Tyr Ala Gln Trp Leu Ala Glu
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Asn Asp Arg Phe Glu Glu Ala Gln Lys Ala Phe His Lys Ala Gly Arg
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Gln Arg Glu Ala Val Gln Val Leu Glu Gln Leu Thr Asn Asn Ala Val
            850                   855                   860
Ala Glu Ser Arg Phe Asn Asp Ala Ala Tyr Tyr Tyr Trp Met Leu Ser
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Met Gln Cys Leu Asp Ile Ala Gln Ala Asp Pro Ala Gln Lys Asp Thr
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Met Leu Gly Lys Phe Tyr His Phe Gln Arg Leu Ala Glu Leu Tyr His
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Gly Tyr His Ala Ile His Arg His Thr Glu Asp Pro Phe Ser Val His
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Arg Pro Glu Thr Leu Phe Asn Ile Ser Arg Phe Leu Leu His Ser Leu
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Pro Lys Asp Thr Pro Ser Gly Ile Ser Lys Val Lys Ile Leu Phe Thr
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Leu Ala Lys Gln Ser Lys Ala Leu Gly Ala Tyr Arg Leu Ala Arg His
                965                   970                   975
Ala Tyr Asp Lys Leu Arg Gly Leu Tyr Ile Pro Ala Arg Phe Gln Lys
            980                   985                   990
Ser Ile Glu Leu Gly Thr Leu Thr Ile Arg Ala Lys Pro Phe His Asp
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Ser Glu Glu Leu Val Pro Leu Cys Tyr Arg Cys Ser Thr Asn Asn Pro
            1010                  1015                  1020
Leu Leu Asn Asn Leu Gly Asn Val Cys Ile Asn Cys Arg Gln Pro Phe
1025                  1030                  1035                  1040
Ile Phe Ser Ala Ser Ser Tyr Asp Val Leu His Leu Val Glu Phe Tyr
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Leu Glu Glu Gly Ile Thr Asp Glu Glu Ala Ile Ser Leu Ile Asp Leu
            1060                  1065                  1070
Glu Val Leu Arg Pro Lys Arg Asp Asp Arg Gln Leu Glu Ile Ala Asn
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5103

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      Asn Ser Ser Gln Ile Leu Arg Leu Val Glu Thr Lys Asp Ser Ile Gly
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      Asp Glu Asp Pro Phe Thr Ala Lys Leu Ser Phe Glu Gln Gly Gly Ser
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      Glu Phe Val Pro Val Val Val Ser Arg Leu Val Leu Arg Ser Met Ser
                         1125                   1130                   1135
      Arg Arg Asp Val Leu Ile Lys Arg Trp Pro Pro Pro Leu Arg Trp Gln
                   1140                   1145                   1150
      Tyr Phe Arg Ser Leu Leu Pro Asp Ala Ser Ile Thr Met Cys Pro Ser
               1155                   1160                   1165
      Cys Phe Gln Val Gly Gly His Pro Gly Ser Ser His Val Leu Leu Leu
           1170                   1175                   1180
      Ala Thr Phe Pro Leu Pro Lys Cys Pro Ser Gly Arg Arg Gly Pro Trp
      1185                   1190                   1195                   1200
      Glu Gly Gly Ala His Pro Trp Leu Gln Val Gly Thr Glu Ala Cys Leu
                   1205                   1210                   1215
      Ser Ser Pro Leu Leu Ala Phe His Val His Leu Lys Trp Thr Ser Leu
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      <211> 1989
      <212> DNA
      <213> Homo sapiens

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      120
      agaactgtgc caaatcttcg ctgcctatgt gcggaaaact gccaggctga gagacaaagc
      180
      agacctcctg gtgaatgaaa ttaacgcgta tgctgctaca gagaccccgc atttaaagct
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      gggcctgatg aactttgcag atgagtttgc caaacttcag gattatcgac aagcagaggt
      300
      tgaaagactt gaagcccaaa aaggttgaaa gacttgaagc caaagtagtt gaacccttga
      360
      aaacttatgg gaccattgtg aaaatgaaac gggatgacct caaagcaaca ctcacagcaa
      420
      ggaatcgaga agctaagcaa ttaactcagt tagaaagaac acgtcagcga aacccatctg
      480
      atcgacatgt tattgtatcc tttgaatttg ggtctttaaa aaaatgttta aggcagaaac
      540
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      600
      taacaacttt gaaaggcaga aaatgaagga tataaagact atattttctg aatttatcac
      660
      aatcgaaatg ttatttcacg gcaaagcttt agaggtctac actgctgcct accagaatat
      720
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5104

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1989

<210> 5924
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<212> PRT
<213> Homo sapiens

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Lys Met Lys Asp Ile Lys Thr Ile Phe Ser Glu Phe Ile Thr Ile Glu
             35                   40                   45
Met Leu Phe His Gly Lys Ala Leu Glu Val Tyr Thr Ala Ala Tyr Gln
             50                   55                   60
Asn Ile Gln Asn Ile Asp Glu Asp Glu Asp Leu Glu Val Phe Arg Asn
65                           70                   75                   80
Ser Leu Tyr Ala Pro Asp Tyr Ser Ser Arg Leu Asp Ile Val Arg Ala
                  85                   90                   95
Asn Ser Lys Ser Pro Leu Gln Arg Ser Leu Ser Ala Lys Cys Val Ser
                  100                  105                  110
Gly Thr Gly Gln Val Ser Thr Cys Arg Leu Arg Lys Asp Gln Gln Ala
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Glu Asp Asp Glu Asp Asp Glu Leu Asp Val Thr Glu Glu Glu Asn Phe
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Leu Lys
145
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<213> Homo sapiens

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120
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5106

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5107

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4140
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4538

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<212> PRT
<213> Homo sapiens

<400> 5926
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Gln Pro Phe Leu Pro Val Phe Thr Met Pro Leu Leu Ser Pro Ser Pro
            35   40   45
Ala Pro Pro Pro Ile Ser Pro Val Leu Pro Leu Val Pro Pro Pro Ala
        50   55   60
Thr Ala Leu Asn Pro Pro Ala Pro Pro Thr Phe His Gln Pro Gln Lys
65   70   75   80
Phe Ala Gly Val Asn Lys Ala Pro Ser Val Ile Thr His Thr Ala Ser
                85   90   95
Ala Thr Leu Thr His Asp Ala Pro Ala Thr Thr Phe Ser Gln Ser Gln
            100   105   110
Gly Leu Val Ile Thr Thr His His Pro Ala Pro Ser Ala Ala Pro Cys
        115   120   125
Gly Leu Ala Leu Ser Pro Val Thr Arg Pro Pro Gln Pro Arg Leu Thr
    130   135   140
Phe Val His Pro Lys Pro Val Ser Leu Thr Gly Gly Arg Pro Lys Gln
145   150   155   160
Pro His Lys Ile Val Pro Ala Pro Lys Pro Glu Pro Val Ser Leu Val
                165   170   175
Leu Lys Asn Ala Arg Ile Ala Pro Ala Ala Phe Ser Gly Gln Pro Gln
            180   185   190
Ala Val Ile Met Thr Ser Gly Pro Leu Lys Arg Glu Gly Met Leu Ala
        195   200   205
Ser Thr Val Ser Gln Ser Asn Val Val Ile Ala Pro Ala Ala Ile Ala
    210   215   220
Arg Ala Pro Gly Val Pro Glu Phe His Ser Ser Ile Leu Val Thr Asp
225   230   235   240
Leu Gly His Gly Thr Ser Ser Pro Pro Ala Pro Val Ser Arg Leu Phe
                245   250   255
Pro Ser Thr Ala Gln Asp Pro Leu Gly Lys Gly Glu Gln Val Pro Leu

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         290                 295                 300
Pro Gln Ser Pro Gln Asn Asn Cys Ser Gly Lys Ser Asp Pro Lys Asn
305                 310                 315                 320
Val Ala Ala Leu Lys Asn Arg Gln Met Lys His Ile Ser Ala Glu Gln
                 325                 330                 335
Lys Arg Arg Phe Asn Ile Lys Met Cys Phe Asp Met Leu Asn Ser Leu
                 340                 345                 350
Ile Ser Asn Asn Ser Lys Leu Thr Ser His Ala Ile Thr Leu Gln Lys
                 355                 360                 365
Thr Val Glu Tyr Ile Thr Lys Leu Gln Gln Glu Arg Gly Gln Met Gln
   , 370                 375                 380
Glu Glu Ala Arg Arg Leu Arg Glu Glu Ile Glu Glu Leu Asn Ala Thr
385                 390                 395                 400
Ile Ile Ser Cys Gln Gln Leu Leu Pro Ala Thr Gly Val Pro Val Thr
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Arg Arg Gln Phe Asp His Met Lys Asp Met Phe Asp Glu Tyr Val Lys
                 420                 425                 430
Thr Arg Thr Leu Gln Asn Trp Lys Phe Trp Ile Phe Ser Ile Ile Ile
                 435                 440                 445
Lys Pro Leu Phe Glu Ser Phe Lys Gly Met Val Ser Thr Ser Ser Leu
         450                 455                 460
Glu Glu Leu His Arg Thr Ala Leu Ser Trp Leu Asp Gln His Cys Ser
465                 470                 475                 480
Leu Pro Ile Leu Arg Pro Met Val Leu Ser Thr Leu Arg Gln Leu Ser
                 485                 490                 495
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<212> DNA
<213> Homo sapiens

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420
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1620
agtaagcggt ggcatgaatc tctcgctctt ctctgtatgt gcggatactg cctctgactc
1680
ggatcgtgtc cccgatctct atctttgttt tctgctcaat ggtctcttgt agcttcttaa
1740
gttgtgaggt taagctgagc tctcttgctg cacttggagc agccct
1786

<210> 5928
<211> 202
<212> PRT
<213> Homo sapiens

<400> 5928
Met Leu Glu Leu Pro Thr Ile Tyr Arg Lys Val Tyr Asp Gln Pro Phe

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     1                5                    10                  15
     His Ser Ser Ala Leu Glu Lys Glu Glu Ala Leu Ser Asn Pro Gly Ala
                 20                   25                  30
     Leu Asp Leu Pro Ser Leu Thr Ser Leu Leu Ser Glu Lys Ala Lys Glu
                 35                   40                  45
     Phe Leu Met Glu Asn Arg Val Gln Ser Phe Tyr Gln Gln Glu Leu Glu
             50                   55                  60
     Met Val Glu Ser Leu Leu Ser Leu Ala Asn Gln Pro Val Ile His Ser
     65                       70                  75                  80
     Ala Cys Ser Asp Gln Val Asn Phe Lys Lys Asp Thr Thr Ser Lys Ala
                     85                   90                  95
     Ile His Ser Ile Phe Lys Asn Ala Ile Gln Leu Leu Gln Glu Lys Gly
                 100                  105                 110
     Leu Val Phe Gln Lys Asp Asp Gly Phe Asp Asn Leu Tyr Tyr Val Thr
             115                  120                 125
     Arg Glu Asp Lys Asp Leu His Arg Lys Ile His Arg Ile Ile Gln Gln
             130                  135                 140
     Asp Cys Gln Lys Pro Asn His Met Glu Lys Gly Cys His Phe Leu His
     145                  150                  155                 160
     Ile Leu Ala Cys Ala Arg Leu Ser Ile Arg Pro Gly Leu Ser Glu Ala
                 165                  170                 175
     Val Leu Gln Gln Val Leu Glu Leu Leu Glu Asp Gln Ser Asp Ile Val
                 180                  185                 190
     Ser Thr Met Glu His Tyr Tyr Thr Ala Phe
             195                  200
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<210> 5929
<211> 606
<212> DNA
<213> Homo sapiens

<400> 5929
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cgctccccgc ctccccagct cttctccgct cctccccccc gcgcttggct cggcgcgctc
120
cggccggccg caaagtttcc cgggcggcag cggcggctgc gcctcgcttc agcgatggcc
180
gcggagctga gcatggggcc agagctgccc accagcccgc tggccatgga gtatgtcaac
240
gacttcgacc tgctcaagtt cgacgtgaag aaggagccac tggggcgcgc ggagcgtccg
300
ggcaggccct gcacacgcct gcagccagcc ggctcggtgt cctccacacc gctcagcact
360
ccgtgtagct ccgtgccctc gtcgcccagc ttcagcccga ccgaacagaa gacacacctc
420
gaggatctgt actggatggc gagcaactac cagcagatga acccccgaggc gctcaacctg
480
acgcccgagg acgcggtgga agcgctcatc ggctcgcacc cagtgccaca gccgctgcaa
540
agcttcgaca gctttcgcgg cgctcaccac caccaccatc accaccaccc tcacccgcac
600
cacgcg
606
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<210> 5930
<211> 144
<212> PRT
<213> Homo sapiens

<400> 5930
Met Ala Ala Glu Leu Ser Met Gly Pro Glu Leu Pro Thr Ser Pro Leu
1   5   10   15
Ala Met Glu Tyr Val Asn Asp Phe Asp Leu Leu Lys Phe Asp Val Lys
            20   25   30
Lys Glu Pro Leu Gly Arg Ala Glu Arg Pro Gly Arg Pro Cys Thr Arg
        35   40   45
Leu Gln Pro Ala Gly Ser Val Ser Ser Thr Pro Leu Ser Thr Pro Cys
    50   55   60
Ser Ser Val Pro Ser Ser Pro Ser Phe Ser Pro Thr Glu Gln Lys Thr
65   70   75   80
His Leu Glu Asp Leu Tyr Trp Met Ala Ser Asn Tyr Gln Gln Met Asn
            85   90   95
Pro Glu Ala Leu Asn Leu Thr Pro Glu Asp Ala Val Glu Ala Leu Ile
            100   105   110
Gly Ser His Pro Val Pro Gln Pro Leu Gln Ser Phe Asp Ser Phe Arg
        115   120   125
Gly Ala His His His His His His His His Pro His Pro His His Ala
    130   135   140

<210> 5931
<211> 478
<212> DNA
<213> Homo sapiens

<400> 5931
nggagatggc ggagtcgctt gaggtctccg cgccgctccc tgtacaaact ggtgggctcg
60
ccgccttgga aagaggcttt ccggcagaga tgcctggaga gaatgagaaa cagccgggac
120
aggctcctaa acaggtaccg ccaggctgga agcagtgggc cagggaattc tcagaacagc
180
tttctagttc aagaggtgat ggaagaagag tggaatgctt tgcagtcagt ggagaattgt
240
ccagaagact tggctcagct ggaggagctg atagacatgg ctgtgctgga ggaaattcaa
300
caggagctga tcaaccaagg tacaacctga gaatcacaag cggtgtggtg gtgtgtcagt
360
gtggcctgtc catcccatct cattcttctg agttgacaga gcagaagctt cgtgcctgtt
420
tagagggtag tataaatgag cacagtgcac cttgtcccca cacaccccct tcacgcgt
478

<210> 5932
<211> 109
<212> PRT
<213> Homo sapiens

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<400> 5932
Xaa Arg Trp Arg Ser Arg Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys
 1               5                  10                  15
Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu
            20                  25                  30
Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln
        35                  40                  45
Ala Gly Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln
    50                  55                  60
Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys
65                  70                  75                  80
Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu
            85                  90                  95
Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Gly Thr Thr
            100                 105
```

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<210> 5933
<211> 1953
<212> DNA
<213> Homo sapiens
```

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<400> 5933
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60
gagctgaagc taaaggacga ggaatgtgag cggctgtcca aggtgcggga gcagctagaa
120
caggagctgg aagagctgac ggccagcctg tttgaggaag ctcacaagat ggttcgagaa
180
gccaacatga agcaggcggc atcagaaaag cagctgaagg aggctcgggg caagatcgac
240
atgctgcagg cagaggtgac agccttgaag acactggtca tcacgtccac accagcctct
300
cccaaccgcg agcttcaccc ccagctgctg agccccacca aggccgggcc ccgaaagggc
360
cactctcgcc acaagagcac cagcagcacc ctctgccccg ccgtgtgtcc cgctgcggga
420
cacaccctca ccccagacag agagggcaag gaggtggaca caatcctgtt tgcagagttc
480
caggcctgga gggaatcccc caccctggac aagacctgcc ccttcctgga aagggtgtac
540
cgagaggacg tgggcccctg cctggacttc acaatgcagg agctctcggt gctggtacgg
600
gccgccgtgg aggacaacac gctcaccatt gagccggtgg cttcgcagac gctgcccaca
660
gtgaaggtgg ccgaggttga ctgtagcagc accaacacat gtccctgag cgggctgacc
720
cgcacctgcc gccaccgaat ccggctcggg gactccaaaa gccattacta catctcgcca
780
tcttcccggg ccaggatcac cgcagtgtgc aacttcttca cctacatccg ctacatccag
840
caaggcctgg tgcggcagga cgcagagccc atgttctggg agatcatgag gttgcggaag
900
gagatgtcac tggccaagct cggcttcttc ccccaggagg cttagggcgc ggcccaggcc
960
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tgaaggggag ctctgagaca gagcaaacac ccaccccaga acaagccgac acacagggag
1020
acgggggcct ggagccagcc ctgagccaga ggcagaatgg atggacagac aggccatgga
1080
ggcagcactg agccagcacc acacgtccat cctgggacag acgggcctgg acttcacggc
1140
aagacccccc tctcttcccc actgggttct gccaccacca ggaggatttc aagaaagcac
1200
caaagaccag ggagctcgga tccatactcg gggggcctca gcccttggga ggggacacct
1260
gaggcagcca gcgcccccctc cccagtcccc agaactgcct gcaggtgcct tgttgctggc
1320
ttgtcttcag aaagggactg ttctgggtgg ctggatctcc agggtaccct ccaccccagc
1380
tgccaagccc tgggccagca gcacccccctt gtggccatcc tgtgccttgt tcccggtggc
1440
ctccctattg gactactagg aggggctggc agggcctcca tagcacagaa ttgccccaaa
1500
gccttgttaa gatgagtcaa gacccctccc ccgcttcctc ccttcctttc ccccttcctc
1560
cctccccctt cataaaggcc tcccttgtca ccttccctcc caccccgtct cagccctgtg
1620
ctcctggagg ccctgctccc aaaaccgctg gaaggactgg ggcactttct gccacagtag
1680
aacacagaca gggcttcaga tcacccacgc ctgttttcag ctgtgggtgg ccatgcagac
1740
acgcgccctg gcatgtgggg cctgggtggg caggcaggac ctgggccctc ccacccatca
1800
gagcccactc aggaccagcg ttcggagctc ccacctggac gcatccctca ccacgtccgg
1860
atttccttct ttggatggaa tgtaacgcga tctctattta ataaaggcag gctttgttgg
1920
tacaggcaaa aaaaaaaaaa aaaaaaaaaa aaa
1953

<210> 5934
<211> 314
<212> PRT
<213> Homo sapiens

<400> 5934
Met Glu Ile Arg Glu Lys Gly Ser Glu Phe Leu Lys Glu Glu Leu His
1   5   10   15
Arg Ala Gln Lys Glu Leu Lys Leu Lys Asp Glu Glu Cys Glu Arg Leu
            20   25   30
Ser Lys Val Arg Glu Gln Leu Glu Gln Glu Leu Glu Glu Leu Thr Ala
            35   40   45
Ser Leu Phe Glu Glu Ala His Lys Met Val Arg Glu Ala Asn Met Lys
        50   55   60
Gln Ala Ala Ser Glu Lys Gln Leu Lys Glu Ala Arg Gly Lys Ile Asp
65   70   75   80
Met Leu Gln Ala Glu Val Thr Ala Leu Lys Thr Leu Val Ile Thr Ser
                85   90   95
Thr Pro Ala Ser Pro Asn Arg Glu Leu His Pro Gln Leu Leu Ser Pro

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                100                 105                 110
    Thr Lys Ala Gly Pro Arg Lys Gly His Ser Arg His Lys Ser Thr Ser
            115                 120                 125
    Ser Thr Leu Cys Pro Ala Val Cys Pro Ala Ala Gly His Thr Leu Thr
        130                 135                 140
    Pro Asp Arg Glu Gly Lys Glu Val Asp Thr Ile Leu Phe Ala Glu Phe
    145                 150                 155                 160
    Gln Ala Trp Arg Glu Ser Pro Thr Leu Asp Lys Thr Cys Pro Phe Leu
                    165                 170                 175
    Glu Arg Val Tyr Arg Glu Asp Val Gly Pro Cys Leu Asp Phe Thr Met
                180                 185                 190
    Gln Glu Leu Ser Val Leu Val Arg Ala Ala Val Glu Asp Asn Thr Leu
            195                 200                 205
    Thr Ile Glu Pro Val Ala Ser Gln Thr Leu Pro Thr Val Lys Val Ala
        210                 215                 220
    Glu Val Asp Cys Ser Ser Thr Asn Thr Cys Ala Leu Ser Gly Leu Thr
    225                 230                 235                 240
    Arg Thr Cys Arg His Arg Ile Arg Leu Gly Asp Ser Lys Ser His Tyr
                    245                 250                 255
    Tyr Ile Ser Pro Ser Ser Arg Ala Arg Ile Thr Ala Val Cys Asn Phe
                260                 265                 270
    Phe Thr Tyr Ile Arg Tyr Ile Gln Gln Gly Leu Val Arg Gln Asp Ala
            275                 280                 285
    Glu Pro Met Phe Trp Glu Ile Met Arg Leu Arg Lys Glu Met Ser Leu
        290                 295                 300
    Ala Lys Leu Gly Phe Phe Pro Gln Glu Ala
    305                 310
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<210> 5935
<211> 2727
<212> DNA
<213> Homo sapiens

<400> 5935

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nngtcgcctc cgcctgatcc ccggcctgtc ggccgacccc acctcgccaa ccgaggcgga
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ccgcggagtg tgcgaacgac cccaccgctg ctttctcctc ccccagatca cgcaccccag
120
ctccggaata tggggaactg cctcaaatcc cccacctcgg atgacatctc cctgcttcac
180
gagtctcagt ccgaccgggc tagctttggc gaggggacgg agccggatca ggagccgccg
240
ccgccatatc aggaacaagt tccagttcca gtctaccacc caacacctag ccagactcgg
300
ctagcaactc agctgactga agaggaacaa attaggatag ctcaaagaat aggtcttata
360
caacatctgc ctaaaggagt ttatgaccct ggaagagatg gatcagaaaa aaagatccgg
420
gagtgtgtga tctgtatgat ggactttgtt tatggggacc caattcgatt tctgccgtgc
480
atgcacatct atcacctgga ctgtatagat gactggttga tgagatcctt cacgtgcccc
540
tcctgcatgg agccagttga tgcagcactg ctttcatcct atgagactaa ttgagccagg
600
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gtctcttatc tgacttcaag tgaaccacca ttttggtggt tttgatcttt tgtcactgag
660
cccaaagagc cagggattag gaattaagat cgtgcacaaa agtttcctta aaattcctgg
720
atggctgcag atgttggggg aaaaagtacg tgatatttta gaaacttagt gggaaaagta
780
ggatggtatt tttatgtaaa gccttgaccc aatgtttaaa aatataattg tatttagatc
840
ttgttattgc tccagtacat aggaattgtg taaagtgtta acagcagctg tatttgttta
900
aattgtgtgt attgaagatt aggaaaaaga tagtagttat ttttcctaaa tgaaataact
960
ttcttctctt ccccttcccc acccgaattc ttttctgaag ttgctggcat ttgggtcaag
1020
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1080
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1140
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1200
ataagtgcta tattctgttt gcagttagga aatgcagaat tcaaagtgat ctcctagctt
1260
gtaagcaaac tgagatgcac tatccctttt ctataaaaaa taagttaatg tgtcaagaaa
1320
ccaactctat taaggtgggg tttaatatta ccctttccta tgtgttttat ctaattattt
1380
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1440
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1500
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1560
ctccttgcct cttgtcttga accatagcaa aaggatactg catctctcat tactgtagtg
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1680
ttacatcctg ctagctgact gacaaaacta agcagggaga ataaagataa ttgtatttta
1740
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1800
aaagaaggaa tttctccttt gtttcttgca gttaatgtaa gaatacttta aatctctaag
1860
cttctgaagt gttagaggta gagatggtct agtaaagatg tagtagtaat gttttatcca
1920
tttagcatgt gtttattttt tcatatgtac tcaaaggtga cttattggtt cacctcagtg
1980
atattacagc taaaaaaatc attcattagc aaaaggaaaa gtggtctcaa cctaacatca
2040
gaagtgtttc ttattattat tttatattga gttgaatatt gaactctaac agttttctac
2100
atacaaaaca cagtgtcatg aaggttattc ataattgcat tatagaggaa tgtagtatgt
2160
cataagtact ttgtaaagat ttgacattca actgtagtat ccatatgttg cttaaatttc
2220
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5117

cttatgagcc ccatgatgga aagacttaaa gatgaatttg agaaaaattg aaagaaatta
2280
gattatcagg ttctgttaaa ttgttacatg tatcttgctt aaatttctgt ttattaattt
2340
atatccaccc aagtacataa agcaaatttg gaggaaacaa ctgaagttgt gcaatatttt
2400
ctgataattg cttttttat tcttgtgttt tctacttaaa cataatgtct gtgtcatcaa
2460
gtattatagt cagactttc tttttttcta gattgttaaa attggcaaat gaactttttt
2520
aaaaatcatc ttccatgttg cagttagtct ttcttttcat tacaagtctt tcacagaagt
2580
ttggtggtaa tattgaaaga actagcattg ggcagaatgt gtctttttta ggcactttat
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2700
gttataatac agctgtgaaa aaaaaaa
2727

<210> 5936
<211> 154
<212> PRT
<213> Homo sapiens

<400> 5936
Met Gly Asn Cys Leu Lys Ser Pro Thr Ser Asp Asp Ile Ser Leu Leu
1   5   10   15
His Glu Ser Gln Ser Asp Arg Ala Ser Phe Gly Glu Gly Thr Glu Pro
            20   25   30
Asp Gln Glu Pro Pro Pro Pro Tyr Gln Glu Gln Val Pro Val Pro Val
            35   40   45
Tyr His Pro Thr Pro Ser Gln Thr Arg Leu Ala Thr Gln Leu Thr Glu
    50   55   60
Glu Glu Gln Ile Arg Ile Ala Gln Arg Ile Gly Leu Ile Gln His Leu
65   70   75   80
Pro Lys Gly Val Tyr Asp Pro Gly Arg Asp Gly Ser Glu Lys Lys Ile
                85   90   95
Arg Glu Cys Val Ile Cys Met Met Asp Phe Val Tyr Gly Asp Pro Ile
            100   105   110
Arg Phe Leu Pro Cys Met His Ile Tyr His Leu Asp Cys Ile Asp Asp
        115   120   125
Trp Leu Met Arg Ser Phe Thr Cys Pro Ser Cys Met Glu Pro Val Asp
    130   135   140
Ala Ala Leu Leu Ser Ser Tyr Glu Thr Asn
145   150

<210> 5937
<211> 1536
<212> DNA
<213> Homo sapiens

<400> 5937
naagctttag tgattgtggc ttattcacag ctattctttg ctgcaacctg attgaaaatg
60

ttcagagatt aggcttgaca cccaccactg tcattagatt aaataaacat cttttgagtc
120
tttgcatcag ttatctcaag gtctgagacc tgtggttgtc gaaccccagt ggactttagt
180
agtactcaga tcctcctttg tttggtgcgt agtatattaa caagtaaacc tgcctgtatg
240
ctcaccagaa aggaaacaga gcatgtcagt gctttgattc ttagagcctt tttgcttaca
300
attccagaaa atgctgaagg ccacatcatt ttaggaaaga gtttaattgt acctttaaa
360
gggtcaagag ttatagattc cactgtatta cctgggatac tcattgaaat gtcagaagtt
420
caattaatga ggctattacc tatcaaaaaa tcaactgccc tcaaggtggc actcttttgt
480
acaactttat ccggagacac ttctgacact ggagaaggaa ctgtggtggt cagttatggg
540
gtttctcttg aaaatgcagt cttggaccag ctgcttaacc taggaaggca gctaatcagt
600
gaccacgtag atcttgtcct gtgccaaaaa gttatacatc catctttgaa gcagtttctc
660
aatatgcatc gtattattgc catagacaga attggagtga ctctgatgga acccctgact
720
aaaatgacag gaacacagcc tattggatcc ctaggctcaa tatgtcctaa tagttatgga
780
agtgtgaaag atgtgtgcac tgcaaaattt ggctccaaac attttttca tcttattcct
840
aatgaagcaa caatctgcag cttgcttctc tgcaacagaa atgacactgc ctgggatgag
900
ctgaagctca cgtgtcagac ggcactgcat gtcctgcagt taacactcaa ggaaccatgg
960
gctttgttgg gaggtggctg tactgaaact catttggctg catatatcag acacaagact
1020
cacaacgacc cagaaagcat tctcaaagat gatgaatgta ctcaaacaga acttcaatta
1080
attgctgaag cattttgcag tgccctagaa tctgttgttg gctctttaga acatgatgga
1140
ggtgaaattc tcactgacat gaagtatgga caccttggt cagttcaggc agattctccc
1200
tgtgttgcta actggccaga tttgctttca cagtgtggct gtggattata caatagccag
1260
gaagaactca ctggtctttt cttaagaagc acacgtcgtc catttgtgcc acaaagctgc
1320
cttccacatg aagctgtggg ctcagccagc aacctgacct tggactgttt gactgcaaag
1380
cttagtggcc tacaggtggc tgtagagaca gccaatttga ttttggatct ttcatatgtt
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1536

<210> 5938
<211> 406
<212> PRT

<213> Homo sapiens

<400> 5938

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1               5                   10                  15
Ala Phe Leu Leu Thr Ile Pro Glu Asn Ala Glu Gly His Ile Ile Leu
            20                  25                  30
Gly Lys Ser Leu Ile Val Pro Phe Lys Gly Ser Arg Val Ile Asp Ser
        35                  40                  45
Thr Val Leu Pro Gly Ile Leu Ile Glu Met Ser Glu Val Gln Leu Met
    50                  55                  60
Arg Leu Leu Pro Ile Lys Lys Ser Thr Ala Leu Lys Val Ala Leu Phe
65                  70                  75                  80
Cys Thr Thr Leu Ser Gly Asp Thr Ser Asp Thr Gly Glu Gly Thr Val
                85                  90                  95
Val Val Ser Tyr Gly Val Ser Leu Glu Asn Ala Val Leu Asp Gln Leu
            100                 105                 110
Leu Asn Leu Gly Arg Gln Leu Ile Ser Asp His Val Asp Leu Val Leu
        115                 120                 125
Cys Gln Lys Val Ile His Pro Ser Leu Lys Gln Phe Leu Asn Met His
    130                 135                 140
Arg Ile Ile Ala Ile Asp Arg Ile Gly Val Thr Leu Met Glu Pro Leu
145                 150                 155                 160
Thr Lys Met Thr Gly Thr Gln Pro Ile Gly Ser Leu Gly Ser Ile Cys
                165                 170                 175
Pro Asn Ser Tyr Gly Ser Val Lys Asp Val Cys Thr Ala Lys Phe Gly
            180                 185                 190
Ser Lys His Phe Phe His Leu Ile Pro Asn Glu Ala Thr Ile Cys Ser
        195                 200                 205
Leu Leu Leu Cys Asn Arg Asn Asp Thr Ala Trp Asp Glu Leu Lys Leu
    210                 215                 220
Thr Cys Gln Thr Ala Leu His Val Leu Gln Leu Thr Leu Lys Glu Pro
225                 230                 235                 240
Trp Ala Leu Leu Gly Gly Gly Cys Thr Glu Thr His Leu Ala Ala Tyr
                245                 250                 255
Ile Arg His Lys Thr His Asn Asp Pro Glu Ser Ile Leu Lys Asp Asp
            260                 265                 270
Glu Cys Thr Gln Thr Glu Leu Gln Leu Ile Ala Glu Ala Phe Cys Ser
        275                 280                 285
Ala Leu Glu Ser Val Val Gly Ser Leu Glu His Asp Gly Gly Glu Ile
    290                 295                 300
Leu Thr Asp Met Lys Tyr Gly His Leu Trp Ser Val Gln Ala Asp Ser
305                 310                 315                 320
Pro Cys Val Ala Asn Trp Pro Asp Leu Leu Ser Gln Cys Gly Cys Gly
                325                 330                 335
Leu Tyr Asn Ser Gln Glu Glu Leu Asn Trp Ser Phe Leu Arg Ser Thr
            340                 345                 350
Arg Arg Pro Phe Val Pro Gln Ser Cys Leu Pro His Glu Ala Val Gly
        355                 360                 365
Ser Ala Ser Asn Leu Thr Leu Asp Cys Leu Thr Ala Lys Leu Ser Gly
    370                 375                 380
Leu Gln Val Ala Val Glu Thr Ala Asn Leu Ile Leu Asp Leu Ser Tyr
385                 390                 395                 400
Val Ile Glu Asp Lys Asn
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5120

405

<210> 5939
<211> 795
<212> DNA
<213> Homo sapiens

<400> 5939
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ttatgtgcat tcgcctttcc ccaacgtgtc ccttctcccc tcctcctcat cctccgggcg
120
gcgtgcgcct cctgcctctc cccggccggc cacacggtgg cgctgtgtcc cgctcgcccg
180
cccgcccgcc gctcgcccgc agcctgcaag cgcaaggaac aggagcagca gaaggagcgc
240
gccctgcagc ccaagaagca gcgcctggtg ttcaccgacc tgcagcgacg cacgctgatc
300
gccatcttca aggagaacaa gcggccgtcc aaggagatgc aggtcaccat ctcgcagcag
360
ctcggcttgg agctcaacac cgtcagcaac ttcttcatga acgcgcggcg ccgctgcatg
420
aaccgctggg ctgaggagcc cagcacggcc cccgggggcc ccgccggcgc cacggccact
480
ttctccaagg cctgaggcgc cccggccccg cgccctccct gcctccacgg cctgggcgct
540
gtgccccac gtcacctccc cacatcctgc cggcccggag acccgccccc aggggccacc
600
tggagggggt gctatccggg cccccacac ccggggaggg ggaagcagca cacccccag
660
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795

<210> 5940
<211> 96
<212> PRT
<213> Homo sapiens

<400> 5940
Cys Lys Arg Lys Glu Gln Glu Gln Gln Lys Glu Arg Ala Leu Gln Pro
1   5   10   15
Lys Lys Gln Arg Leu Val Phe Thr Asp Leu Gln Arg Arg Thr Leu Ile
            20   25   30
Ala Ile Phe Lys Glu Asn Lys Arg Pro Ser Lys Glu Met Gln Val Thr
        35   40   45
Ile Ser Gln Gln Leu Gly Leu Glu Leu Asn Thr Val Ser Asn Phe Phe
    50   55   60
Met Asn Ala Arg Arg Arg Cys Met Asn Arg Trp Ala Glu Glu Pro Ser
65   70   75   80
Thr Ala Pro Gly Gly Pro Ala Gly Ala Thr Ala Thr Phe Ser Lys Ala

5121

                    85   90   95

    <210> 5941
    <211> 2590
    <212> DNA
    <213> Homo sapiens

    <400> 5941
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    120
    gctaagcata gcacatcaga gcataacaca gtgtgaggga aataaagtgt acaatgacat
    180
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    240
    agaaggtttc atggacagcg aacataaagc tctactagct aacaaatagg tcttaatgat
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                              5122

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<210> 5942
<211> 89
<212> PRT
<213> Homo sapiens

<400> 5942
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Arg Gln Ser Leu Ala Leu Leu Xaa Gln Val Gly Val Gln Trp His Asp
            20   25   30
Pro Gly Ser Leu Gln Pro Pro Pro Gly Phe Lys Gln Phe Ser Cys

```
              35                    40                    45
Leu Ser Leu Pro Ser Ser Trp Asp Tyr Arg Cys Leu Ser Ser Arg Leu
     50                    55                    60
Ala Thr Phe Cys Ile Phe Ser Arg Asp Arg Val Ser Pro Cys Trp Pro
65                    70                    75                    80
Gly Trp Ser Gln Thr Pro Asp Leu Lys
                   85
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<210> 5943
<211> 781
<212> DNA
<213> Homo sapiens
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<400> 5943
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781
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<210> 5944
<211> 174
<212> PRT
<213> Homo sapiens
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<400> 5944
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1               5                    10                   15
Gly Gln Leu Val Val Ile Gly Lys Asp Glu Ser Tyr Ser Lys Thr Ser
             20                   25                   30
Gly Val Ser Ser Ile Thr Lys Leu Gln Arg Gln Pro Phe Gly Val Glu
```

```
         35                  40                  45
Thr Lys Pro Gly Ile Leu Cys Cys Phe Gln Asn Glu Phe Glu Asn Pro
    50                  55                  60
Cys Phe Pro Lys Ser His Phe Ser Val Thr Gln Ala Gly Glu Gln Trp
65                  70                  75                  80
Arg Asp Leu Ser Ser Pro Gln Pro Pro Pro Pro Arg Phe Lys Gln Phe
                85                  90                  95
Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp His Arg His Pro Pro Pro
            100                 105                 110
Arg Pro Ala Asn Phe Cys Ile Phe Ser Arg Asp Glu Val Ser Pro Arg
            115                 120                 125
Ser Arg Ser Pro Asp Leu Met Xaa Ser Ala His Leu Gly Leu Pro Lys
        130                 135                 140
Cys Trp Asp Tyr Arg Arg Glu Pro Leu Arg Pro Ala Gln Ile Ser Leu
145                 150                 155                 160
Leu Phe Ser Lys Ser Pro Ser Gln Asp Ile Gln Ala Lys Ala
                165                 170
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<210> 5945
<211> 869
<212> DNA
<213> Homo sapiens

<400> 5945
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720
ggcaaaaatg agaaaaaat tcaggttcta acagacaaaa ttgatgtact tctgcaacag
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869
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<210> 5946
<211> 121
<212> PRT
<213> Homo sapiens

<400> 5946
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Glu Val Ile Ser Ala Gly Pro Cys Glu Lys Ile His Asp Glu Asn Leu
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Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly Tyr Glu
                20                  25                  30
Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val Glu Arg
                35                  40                  45
Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn Gln Gln
    50                  55                  60
Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Gly Glu Lys Ile Gln
65                  70                  75                  80
Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu Glu Leu
                85                  90                  95
Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys Leu Val
                100                 105                 110
Glu Gln Leu Lys Glu Glu Arg Glu Leu
                115                 120
```

<210> 5947
<211> 2283
<212> DNA
<213> Homo sapiens

<400> 5947
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gaagtatctg tttctcctag agcttcaaaa catcattatt caagatcacg atcaaggtca
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300
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480
cgcaaagaaa gaaagtcatc aagaggcaga agtcactcaa gatctaggtc tcgtgaaaga
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720
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2283
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<210> 5948
<211> 76
<212> PRT
<213> Homo sapiens

<400> 5948
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Ser Pro Asp Arg Asp Lys Lys Lys Glu Gln Ser Glu Val Ser Val Ser
            20                  25                  30
Pro Arg Ala Ser Lys His His Tyr Ser Arg Ser Arg Ser Arg Ser Arg
        35                  40                  45
Glu Arg Lys Arg Lys Ser Asp Asn Glu Gly Arg Lys His Arg Ser Arg
    50                  55                  60
Ser Arg Ser Lys Glu Arg Ala Tyr Ala Arg Arg Asp
65                  70                  75
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<210> 5949
<211> 4706
<212> DNA
<213> Homo sapiens

<400> 5949
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3840
aagctgcgct acgccatcag catgaacacg ggctttgaac tctcctagct cctgtcccag
3900
ccctgcctcc agggctcctg ggctgccagg gaccttcagc tcccagaggc agtgtggtcc
3960
tgggaatgtg accaacatgc caggtgacat tggcccctag accctctcta tagccatgag
4020
actccttgtg gcctcaagaa atttagacgc ccacgacagc actacacagc atctccaggt
4080
gatgcccaag cacagggct gcagaaaata aacctccaga ttccaccaac acgggtccat
4140
```

```
tcttcctggt gatggcagag gggcttcttt tagctagttt gatcttttgg gagtctgtct
4200
ttccttagcc gtctgagtga gctgtgtatg aacaagtccc aggagttcca agagtctaga
4260
gtggtttttg cagcatgggt tgagtgtaca aagcctactg tgcgtgagat cctctccttc
4320
cgtttctgaa atctcttact caggtaaggc ctcgccaagc ctctatgcac cccacaaagt
4380
ttctgcctcc atgccgtcca cagcgcctct tcccagacag ccaggcccat ctgctgccca
4440
gggaagcgca ggcgcctgct agggacgcta tggacaccgt gagtccaagg cgctgctcct
4500
gccttgaagc cacgcgctcc acgccgcggc cctcccattt tctgcgtcct cagcgggctg
4560
agctgccaga gagtcttccc ggacctattc ccgtcctatg cattcacatt ggcatcctgg
4620
tttgggggaa gaaaaacaac ggcccttagc agcagccccg tttccagaat gtgctgcctg
4680
ttcccccaaag cctgcttgtc ccgcgg
4706
```

<210> 5950
<211> 397
<212> PRT
<213> Homo sapiens

<400> 5950

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Met Pro Arg Ala Ala Arg Lys Ala Val Cys Ala Glu Gln Trp Met Phe
1               5                   10                  15
Leu Thr Phe Phe Lys Asp Gly Tyr Glu Gln Leu Arg Gln Leu Ser Gln
            20                  25                  30
His Ala Met Lys Gly Val Ile Arg Val Lys Phe Val Asn Asp Leu Gly
        35                  40                  45
Val Asp Glu Ala Gly Ile Asp Gln Asp Gly Val Phe Lys Glu Phe Leu
    50                  55                  60
Glu Glu Ile Ile Lys Arg Val Phe Asp Pro Ala Leu Asn Leu Phe Lys
65                  70                  75                  80
Thr Thr Ser Gly Asp Glu Arg Leu Tyr Pro Ser Pro Thr Ser Tyr Ile
                85                  90                  95
His Glu Asn Tyr Leu Gln Leu Phe Glu Phe Val Gly Lys Met Leu Gly
            100                 105                 110
Lys Ala Val Tyr Glu Gly Ile Val Val Asp Val Pro Phe Ala Ser Phe
            115                 120                 125
Phe Leu Ser Gln Leu Leu Gly His His His Ser Val Phe Tyr Ser Ser
            130                 135                 140
Val Asp Glu Leu Pro Ser Leu Asp Ser Glu Phe Tyr Lys Asn Leu Thr
145                 150                 155                 160
Ser Ile Lys Arg Tyr Asp Gly Asp Ile Thr Asp Leu Gly Leu Thr Leu
                165                 170                 175
Ser Tyr Asp Glu Asp Val Met Gly Gln Leu Val Cys His Glu Leu Ile
            180                 185                 190
Pro Gly Gly Lys Thr Ile Pro Val Thr Asn Glu Asn Lys Ile Ser Tyr
            195                 200                 205
Ile His Leu Met Ala His Phe Arg Met His Thr Gln Ile Lys Asn Gln
```

```
          210                    215                    220
Thr Ala Ala Leu Ile Ser Gly Phe Arg Ser Ile Ile Lys Pro Glu Trp
225                    230                    235                    240
Ile Arg Met Phe Ser Thr Pro Glu Leu Gln Arg Leu Ile Ser Gly Asp
                245                    250                    255
Asn Ala Glu Ile Asp Leu Glu Asp Leu Lys Lys His Thr Val Tyr Tyr
                260                    265                    270
Gly Gly Phe His Gly Ser His Arg Val Ile Ile Trp Leu Trp Asp Ile
            275                    280                    285
Leu Ala Ser Asp Phe Thr Pro Asp Glu Arg Ala Met Phe Leu Lys Phe
        290                    295                    300
Val Thr Ser Cys Ser Arg Pro Pro Leu Leu Gly Phe Ala Tyr Leu Lys
305                    310                    315                    320
Pro Pro Phe Ser Ile Arg Cys Val Glu Val Ser Asp Asp Gln Asp Thr
                325                    330                    335
Gly Asp Thr Leu Gly Ser Val Leu Arg Gly Phe Phe Thr Ile Arg Lys
                340                    345                    350
Arg Glu Pro Gly Gly Arg Leu Pro Thr Ser Ser Thr Cys Phe Asn Leu
            355                    360                    365
Leu Lys Leu Pro Asn Tyr Ser Lys Lys Ser Val Leu Arg Glu Lys Leu
        370                    375                    380
Arg Tyr Ala Ile Ser Met Asn Thr Gly Phe Glu Leu Ser
385                    390                    395
```

<210> 5951
<211> 1724
<212> DNA
<213> Homo sapiens

<400> 5951
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ngaaatcttg tataccgccc gcgagaagaa gccgatcgag cctttgtctg gaaagtcagc
60
atctccggct ccggctgcaa tgtgttcctg gtgacattag catcgggcag acccgccagg
120
agaggagggg tcgccaggtt cccgtctgct ttcggaggcg gatcgagcgg gtgacttttg
180
tgcattcgtt ttaatttttg gaaatctctc ttttttcctc cctcgctcgc tgccgggcat
240
gtcctgatct ggcggccgct cctaccaccc tgggcagccg agcagagtgg tccccagcgg
300
tctccctccc tgcctccctg actttgcaac accgcgttcc gggaggaccg gcctcggcga
360
gggaggaggc gggggagctg cgaacaccca gacccaaacc ctgacatgct ctggggcgga
420
gaggaggaag ccaggagctg agcgcgccgc gtgggctgct tcgccctccg gctccgagcg
480
ccgggctccg ggcgccctgc cctgcgcctg ggcagcagcc ttgctggtct ggggggcgcc
540
ccccgcttcc cgcccggggg gttcgcggcc ggcaggacca tgctgctgaa agagtaccgg
600
atctgcatgc cgctcaccgt agacgagtac aaaattggac agctgtacat gatcagcaaa
660
cacagccatg aacagagtga ccggggagaa ggggtggagg tcgtccagaa tgagcccttt
720
```

gaggaccctc accatggcaa tgggcagttc accgagaagc gggtgtatct caacagcaaa
780
ctgcctagtt gggctagagc tgttgtcccc aaaatatttt atgtgacaga gaaggcttgg
840
aactattatc cctacacaat tacagaatac acatgttcct ttctgccgaa attctccatt
900
catatagaaa ccaagtatga ggacaacaaa ggaagcaatg acaccatttt cgacaatgaa
960
gccaaagacg tggagagaga agtttgcttt attgatattg cctgcgatga aattccagag
1020
cgctactaca aagaatctga ggatcctaag cacttcaagt cagagaagac aggacgggga
1080
cagttgaggg aaggctggag agatagtcat cagcctatca tgtgctccta caagctggtg
1140
actgtgaagt ttgaggtctg ggggcttcag accagagtgg aacaatttgt acacaaggtg
1200
gtccgagaca ttctgctgat tggacataga caggcttttg catgggttga tgagtggtat
1260
gacatgacaa tggatgaagt ccgagaattt gaacgagcca ctcaggaagc caccaacaag
1320
aaaatcggca ttttcccacc tgcaatttct atctccagca tccccctgct gccttcttcc
1380
gtccgcagtg cgccttctag tgctccatcc acccctctct ccacagacgc acccgaattt
1440
ctgtccgttc ccaaagatcg gccccggaaa aagtctgccc agaaactct cacacttcca
1500
gaccctgaga aaaaagccac cctgaattta cccggcatgc actcttcaga taagccatgt
1560
cggcccaaat ctgagtaact ttatataaat atctcatggg gttttatatt ttcatttgtt
1620
gttgttgttt tttttaaga atcttctgat agagaaaaag actgctttgt cactcaaaca
1680
tgttccttcg accttaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
1724

<210> 5952
<211> 378
<212> PRT
<213> Homo sapiens

<400> 5952
Ala Arg Arg Val Gly Cys Phe Ala Leu Arg Leu Arg Ala Pro Gly Ser
1   5   10   15
Gly Arg Pro Ala Leu Arg Leu Gly Ser Ser Leu Ala Gly Leu Gly Gly
            20   25   30
Ala Pro Arg Phe Pro Pro Gly Gly Phe Ala Ala Gly Arg Thr Met Leu
            35   40   45
Leu Lys Glu Tyr Arg Ile Cys Met Pro Leu Thr Val Asp Glu Tyr Lys
        50   55   60
Ile Gly Gln Leu Tyr Met Ile Ser Lys His Ser His Glu Gln Ser Asp
65   70   75   80
Arg Gly Glu Gly Val Glu Val Val Gln Asn Glu Pro Phe Glu Asp Pro
                85   90   95
His His Gly Asn Gly Gln Phe Thr Glu Lys Arg Val Tyr Leu Asn Ser

```
              100                 105                 110
Lys Leu Pro Ser Trp Ala Arg Ala Val Val Pro Lys Ile Phe Tyr Val
         115                 120                 125
Thr Glu Lys Ala Trp Asn Tyr Tyr Pro Tyr Thr Ile Thr Glu Tyr Thr
     130                 135                 140
Cys Ser Phe Leu Pro Lys Phe Ser Ile His Ile Glu Thr Lys Tyr Glu
145                 150                 155                 160
Asp Asn Lys Gly Ser Asn Asp Thr Ile Phe Asp Asn Glu Ala Lys Asp
                 165                 170                 175
Val Glu Arg Glu Val Cys Phe Ile Asp Ile Ala Cys Asp Glu Ile Pro
             180                 185                 190
Glu Arg Tyr Tyr Lys Glu Ser Glu Asp Pro Lys His Phe Lys Ser Glu
         195                 200                 205
Lys Thr Gly Arg Gly Gln Leu Arg Glu Gly Trp Arg Asp Ser His Gln
     210                 215                 220
Pro Ile Met Cys Ser Tyr Lys Leu Val Thr Val Lys Phe Glu Val Trp
225                 230                 235                 240
Gly Leu Gln Thr Arg Val Glu Gln Phe Val His Lys Val Val Arg Asp
                 245                 250                 255
Ile Leu Leu Ile Gly His Arg Gln Ala Phe Ala Trp Val Asp Glu Trp
             260                 265                 270
Tyr Asp Met Thr Met Asp Glu Val Arg Glu Phe Glu Arg Ala Thr Gln
         275                 280                 285
Glu Ala Thr Asn Lys Lys Ile Gly Ile Phe Pro Pro Ala Ile Ser Ile
     290                 295                 300
Ser Ser Ile Pro Leu Leu Pro Ser Ser Val Arg Ser Ala Pro Ser Ser
305                 310                 315                 320
Ala Pro Ser Thr Pro Leu Ser Thr Asp Ala Pro Glu Phe Leu Ser Val
             325                 330                 335
Pro Lys Asp Arg Pro Arg Lys Lys Ser Ala Pro Glu Thr Leu Thr Leu
         340                 345                 350
Pro Asp Pro Glu Lys Lys Ala Thr Leu Asn Leu Pro Gly Met His Ser
     355                 360                 365
Ser Asp Lys Pro Cys Arg Pro Lys Ser Glu
     370                 375
```

<210> 5953
<211> 777
<212> DNA
<213> Homo sapiens

<400> 5953
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tttcggcacg aggcccggag tcgtaagagg tctccgcgcc gctccctgta caaactggtg
60
ggctcgccgc cttggaaaga ggctttccgg cagagatgcc tggagagaat gagaaacagc
120
cgggacaggc tcctaaacag gtaccgccag ctgngaagca gtgggccagg gaattctcag
180
aacagctttc tagttcaaga ggtgatggaa gaagagtgga atgctttgca gtcagtggag
240
aattgtccag aagacttggc tcagctggag gagctgatag acatggctgt gctggaggaa
300
attcaacagg agctgatcaa ccaagagcag tccatcatca gcgagtatga gaagagcttg
360
```

cagtttgatg aaaagtgtct cagcatcatg ctggctgagt gggaggcaaa cccactcatc
420

tgtcctgtat gtacaaagcc tgtgatactt gggctgtgat cctctagagc cagcttggac
480

tcacatcatt ctatggggtt gaagacaact cattccctct gaggagcctt gtacatacaa
540

gcctttttatt tataacttat tttgtattga aacttttaaa caatactgaa gaaaaaaaaa
600

cttttccgac atctgttctt ggtcttttgt gacgcaggtt gaaggggag gaatagaaaa
660

agacaaactg ccttggagga gataaaccaa ttttatgtct atcatgttat acaaaaatct
720

agaaataata gatttgtaca gaaaaaatg ataataaatg agaacacaaa acatata
777

<210> 5954
<211> 152
<212> PRT
<213> Homo sapiens

<400> 5954
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Phe Arg His Glu Ala Arg Ser Arg Lys Arg Ser Pro Arg Arg Ser Leu
 1               5                  10                  15
Tyr Lys Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg
            20                  25                  30
Cys Leu Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr
            35                  40                  45
Arg Gln Leu Xaa Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu
        50                  55                  60
Val Gln Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu
65                  70                  75                  80
Asn Cys Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala
                85                  90                  95
Val Leu Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Glu Gln Ser Ile
            100                 105                 110
Ile Ser Glu Tyr Glu Lys Ser Leu Gln Phe Asp Glu Lys Cys Leu Ser
            115                 120                 125
Ile Met Leu Ala Glu Trp Glu Ala Asn Pro Leu Ile Cys Pro Val Cys
        130                 135                 140
Thr Lys Pro Val Ile Leu Gly Leu
145                 150
```

<210> 5955
<211> 1459
<212> DNA
<213> Homo sapiens

<400> 5955
nncaattgga ctgcattatc aaacacatgt gctatgtaca tcctcagtgc acctgccagc
60

agatatcctg gagggctcat gagtgaattt agtccaagat ttaaagccct gcccccaggt
120

gctcagcctg tgatctgtat ccactcagca tgcacttggg cagatgattt gtctgtgtgc
180

taccccttccc cccatattac catacatatg cacggcggga ccagcagcga cggtagcagc
240

agcatggccg cgatctatgg gggtgtagag gggggaggca cacgatccga ggtcctttta
300

gtctcagagg atgggaagat cctggcagaa gcagatggac tgagcacaaa ccactggctg
360

atcgggacag acaagtgtgt ggagaggatc aatgagatgg tgaacagggc caaacggaaa
420

gcaggggtgg atcctctggt accgctgcga agcttgggcc tatctctgag cggtggggac
480

caggaggacg cggggaggat cctgatcgag gagctgaggg accgatttcc ctacctgagt
540

gaaagctact taatcaccac cgatgccgcc ggctccatcg ccacagctac accggatggt
600

ggagttgtgc tcatatctgg aacaggctcc aactgcaggc tcatcaaccc tgatggctcc
660

gagagtggct gcggcggctg gggccatatg atgggtgatg agggttcagc cctctctgct
720

ccctcagcct actggatcgc acaccaagca gtgaaaatag tgtttgactc cattgacaac
780

ctagaggcgg ctcctcatga tatcggctac gtcaaacagg ccatgttcca ctatttccag
840

gtgccagatc ggctagggat actcactcac ctgtataggg actttgataa atgcaggttt
900

gctgggtttt gccggaaaat tgcagaaggt gctcagcagg gagacccccct ttcccgctat
960

atcttcagga aggctgggga gatgctgggc agacacatcg tagcagtgtt gcccgagatt
1020

gacccggtct tgttccaggg caagattgga ctccccatcc tgtgcgtggg ctctgtgtgg
1080

aagagctggg agctgctgaa ggaaggtttt cttttggcgc tgacccaggg cagagagatc
1140

caggctcaga acttcttctc cagcttcacc ctgatgaagc tgaggcactc ctccgctctg
1200

ggtggggcca gcctaggggc caggcacatc gggcacctcc tccccatgga ctatagcgcc
1260

aatgccattg ccttctattc ctacaccttt tcctagggg ctggtcccgg ctccaccccc
1320

tccaagctca gtggacactg ggtctgaaag gaaggagtct tttgcttcct ttctcctttt
1380

tacaaaaaca aacatagaag aaaataaatg cactttatcc actccccaaa aaaaaaaaaa
1440

aaaaaaaaaa aagtcgacg
1459

<210> 5956
<211> 431
<212> PRT
<213> Homo sapiens

<400> 5956
Xaa Asn Trp Thr Ala Leu Ser Asn Thr Cys Ala Met Tyr Ile Leu Ser
 1   5   10   15
Ala Pro Ala Ser Arg Tyr Pro Gly Gly Leu Met Ser Glu Phe Ser Pro

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                         20                      25                      30
        Arg Phe Lys Ala Leu Pro Pro Gly Ala Gln Pro Val Ile Cys Ile His
                    35                      40                      45
        Ser Ala Cys Thr Trp Ala Asp Asp Leu Ser Val Cys Tyr Pro Ser Pro
                50                      55                      60
        His Ile Thr Ile His Met His Gly Gly Thr Ser Ser Asp Gly Ser Ser
        65                      70                      75                      80
        Ser Met Ala Ala Ile Tyr Gly Gly Val Glu Gly Gly Gly Thr Arg Ser
                            85                      90                      95
        Glu Val Leu Leu Val Ser Glu Asp Gly Lys Ile Leu Ala Glu Ala Asp
                        100                     105                     110
        Gly Leu Ser Thr Asn His Trp Leu Ile Gly Thr Asp Lys Cys Val Glu
                    115                     120                     125
        Arg Ile Asn Glu Met Val Asn Arg Ala Lys Arg Lys Ala Gly Val Asp
            130                     135                     140
        Pro Leu Val Pro Leu Arg Ser Leu Gly Leu Ser Leu Ser Gly Gly Asp
        145                     150                     155                     160
        Gln Glu Asp Ala Gly Arg Ile Leu Ile Glu Glu Leu Arg Asp Arg Phe
                            165                     170                     175
        Pro Tyr Leu Ser Glu Ser Tyr Leu Ile Thr Thr Asp Ala Ala Gly Ser
                    180                     185                     190
        Ile Ala Thr Ala Thr Pro Asp Gly Gly Val Val Leu Ile Ser Gly Thr
                    195                     200                     205
        Gly Ser Asn Cys Arg Leu Ile Asn Pro Asp Gly Ser Glu Ser Gly Cys
            210                     215                     220
        Gly Gly Trp Gly His Met Met Gly Asp Glu Gly Ser Ala Leu Ser Ala
        225                     230                     235                     240
        Pro Ser Ala Tyr Trp Ile Ala His Gln Ala Val Lys Ile Val Phe Asp
                    245                     250                     255
        Ser Ile Asp Asn Leu Glu Ala Ala Pro His Asp Ile Gly Tyr Val Lys
                    260                     265                     270
        Gln Ala Met Phe His Tyr Phe Gln Val Pro Asp Arg Leu Gly Ile Leu
                    275                     280                     285
        Thr His Leu Tyr Arg Asp Phe Asp Lys Cys Arg Phe Ala Gly Phe Cys
                290                     295                     300
        Arg Lys Ile Ala Glu Gly Ala Gln Gln Gly Asp Pro Leu Ser Arg Tyr
        305                     310                     315                     320
        Ile Phe Arg Lys Ala Gly Glu Met Leu Gly Arg His Ile Val Ala Val
                    325                     330                     335
        Leu Pro Glu Ile Asp Pro Val Leu Phe Gln Gly Lys Ile Gly Leu Pro
                    340                     345                     350
        Ile Leu Cys Val Gly Ser Val Trp Lys Ser Trp Glu Leu Leu Lys Glu
                    355                     360                     365
        Gly Phe Leu Leu Ala Leu Thr Gln Gly Arg Glu Ile Gln Ala Gln Asn
            370                     375                     380
        Phe Phe Ser Ser Phe Thr Leu Met Lys Leu Arg His Ser Ser Ala Leu
        385                     390                     395                     400
        Gly Gly Ala Ser Leu Gly Ala Arg His Ile Gly His Leu Leu Pro Met
                    405                     410                     415
        Asp Tyr Ser Ala Asn Ala Ile Ala Phe Tyr Ser Tyr Thr Phe Ser
                    420                     425                     430
```

<210> 5957
<211> 855

<212> DNA
<213> Homo sapiens

<400> 5957
atggcggagt cgttgaggtc tccgcgccgc tccctgtaca aactggtggg ctcgccgcct
60
tggaaagagg ctttccggca gagatgcctg gagagaatga gaaacagccg ggacaggctc
120
ctaaacaggt accgccaggc tggaagcagt gggccaggga attctcagaa cagctttcta
180
gttcaagagg tgatggaaga agagtggaat gctttgcagt cagtggagaa ttgtccagaa
240
gacttggctc agctggagga gctgatagac atggctgtgc tggaggaaat tcaacaggag
300
ctgatcaacc aaggcctgtg atacttgggc tgtgatcctc tagagccagc ttggactcac
360
atcattctat ggggttgaag acaactcatt ccctctgagg agccttgtac atacaagcct
420
tttatttata acttattttg tattgaaact tttaaacaat actgaagaaa aaaaaacttt
480
tccgacatct gttcttggtc ttttgtgaca caggttgaag ggggaggaat agaaaaagac
540
aaactgcctt ggaggagata aaccaatttt atgtctatca tgttatacaa aaatctagaa
600
ataatagatt tgtacagaaa aaaatgataa taaatgagag cacaaaacat ataatttaaa
660
tctggtattt tttcccccat gatattagga tgataatcat ttcaaagcac atgtctagct
720
tcagagtagg atttgttcac tggccaaagc ctgccatgaa actatggctt tcagcatctg
780
tctgctctac tggctcttga caaaactctt gaggtcttca agaaaagtaa tgtactcctg
840
gtgctccagg gctgt
855

<210> 5958
<211> 106
<212> PRT
<213> Homo sapiens

<400> 5958
Met Ala Glu Ser Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys Leu Val
1   5   10   15
Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu Glu Arg
            20   25   30
Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln Ala Gly
        35   40   45
Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln Glu Val
        50   55   60
Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys Pro Glu
65   70   75   80
Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu Glu Glu
                85   90   95
Ile Gln Gln Glu Leu Ile Asn Gln Gly Leu

5138

                    100   105

<210> 5959
<211> 830
<212> DNA
<213> Homo sapiens

<400> 5959
gatgagaaga ttcagccaat attagacaaa gtaggctctt tggtaaacgc aaggcttgaa
60
ttttctcggg gccttatgat gctggttctt gagaagttag ccactgatat tccttgtctg
120
ctatatgatg acaatctctt ctgtcatttg gtggatgaag tactcttgtt tgaaagggag
180
ctacacagtg ttcatggcta tcctggcact tttgctaatt gtatgcatat tctatcagag
240
gaaacctgtt ttcaaagatg ggtgacgggg gagagaaaat ttgctcttca aaaaatggac
300
tcaatgcttt cctcagaagc tgcctgggta tcgcaatata aggatatcac tgacgtggat
360
gaaatgaaag ttccagattg tgcagaaact tttatgactc tactcttggt tataactgac
420
aggtataaaa atcttcccac agcttcccga aagcttcagt tcctggagtt acagaaggac
480
ttagtagatg attttaggat acgattaaca caagtgatga agaagagac tagagcttcc
540
cttggctttc gatactgtgc aattcttaat gctgtgaact acatctcaac agtactagca
600
gattgggctg acaatgtttt ctttctacaa cttcaacagg ctgcactgga ggtgtttgca
660
gagaataata ctctgagtaa attgcagcta ggacagctag cctctatgga gagctctgtc
720
tttgatgaca tgattaacct cttagaacgt ttaaagcatg atatgttgac ccgtcaagta
780
gaccacgttt ttagagaagt taaagatgct gcaaaattgt ataaaaaaga
830

<210> 5960
<211> 251
<212> PRT
<213> Homo sapiens

<400> 5960
Met Met Leu Val Leu Glu Lys Leu Ala Thr Asp Ile Pro Cys Leu Leu
1   5   10   15
Tyr Asp Asp Asn Leu Phe Cys His Leu Val Asp Glu Val Leu Leu Phe
                20   25   30
Glu Arg Glu Leu His Ser Val His Gly Tyr Pro Gly Thr Phe Ala Asn
            35   40   45
Cys Met His Ile Leu Ser Glu Glu Thr Cys Phe Gln Arg Trp Val Thr
        50   55   60
Gly Glu Arg Lys Phe Ala Leu Gln Lys Met Asp Ser Met Leu Ser Ser
65   70   75   80
Glu Ala Ala Trp Val Ser Gln Tyr Lys Asp Ile Thr Asp Val Asp Glu

                              5139

```
                     85                    90                    95
Met Lys Val Pro Asp Cys Ala Glu Thr Phe Met Thr Leu Leu Leu Val
                    100                   105                   110
Ile Thr Asp Arg Tyr Lys Asn Leu Pro Thr Ala Ser Arg Lys Leu Gln
                    115                   120                   125
Phe Leu Glu Leu Gln Lys Asp Leu Val Asp Asp Phe Arg Ile Arg Leu
        130                   135                   140
Thr Gln Val Met Lys Glu Glu Thr Arg Ala Ser Leu Gly Phe Arg Tyr
145                   150                   155                   160
Cys Ala Ile Leu Asn Ala Val Asn Tyr Ile Ser Thr Val Leu Ala Asp
                    165                   170                   175
Trp Ala Asp Asn Val Phe Phe Leu Gln Leu Gln Gln Ala Ala Leu Glu
                    180                   185                   190
Val Phe Ala Glu Asn Asn Thr Leu Ser Lys Leu Gln Leu Gly Gln Leu
                    195                   200                   205
Ala Ser Met Glu Ser Ser Val Phe Asp Asp Met Ile Asn Leu Leu Glu
        210                   215                   220
Arg Leu Lys His Asp Met Leu Thr Arg Gln Val Asp His Val Phe Arg
225                   230                   235                   240
Glu Val Lys Asp Ala Ala Lys Leu Tyr Lys Lys
                    245                   250
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<210> 5961
<211> 585
<212> DNA
<213> Homo sapiens

<400> 5961
gctcggggct gcagtgcgct ctaatggtgc ctgtgaataa ccactgcatt cagcctgggc
60
aatgaagcga gaccccgtct ctaaaaaaaa aattgagggg tcaaagagga tgccaaactt
120
aattagagac tgagacaggg cagggtgccg aggtgtctgc atgcgtttca tgtggatgcc
180
cgtgtctatt ctggcctgct cctgggcccc ctccccactc agccctggct gatgagaatg
240
ggacagggac tcccttctcg tgtccctgtg cagcgtcggc ccaggaggta gcagagcagt
300
atatgcacat ctgggtgtgc cctcctgcat gtccccacac atctgtcatt cctgtctttg
360
cacacctatg tgactcccgc atgtttgtgt ccttatgtgt cccatgcatg ctccccatct
420
gaccttgcgt gttctcgcgt gtctgtgtgc ggccagtcct gccttcactc tctcatgggt
480
ggccctggca gcatgtctgg ctccccagca ggtgagctca ggagataaga tggaagatgc
540
aacagccaat ggtcaagaag actccaaggc cccagatggg tccac
585

<210> 5962
<211> 114
<212> PRT
<213> Homo sapiens

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<400> 5962
Met Cys Gly Asp Met Gln Glu Gly Thr Pro Arg Cys Ala Tyr Thr Ala
1               5                   10                  15
Leu Leu Pro Pro Gly Pro Thr Leu His Arg Asp Thr Arg Arg Glu Ser
            20                  25              ·       30
Leu Ser His Ser His Gln Pro Gly Leu Ser Gly Glu Gly Ala Gln Glu
        35                      40                  45
Gln Ala Arg Ile Asp Thr Gly Ile His Met Lys Arg Met Gln Thr Pro
        50                  55                  60
Arg His Pro Ala Leu Ser Gln Ser Leu Ile Lys Phe Gly Ile Leu Phe
65                  70                  75                  80
Asp Pro Ser Ile Phe Phe Leu Glu Thr Gly Ser Arg Phe Ile Ala Gln
                85                  90                  95
Ala Glu Cys Ser Gly Tyr Ser Gln Ala Pro Leu Glu Arg Thr Ala Ala
            100                 105                 110
Pro Ser


<210> 5963
<211> 1288
<212> DNA
<213> Homo sapiens

<400> 5963
atggggctgt ttggaaagac ccaggagaag ccgcccaaag aactggtcaa tgagtggtca
60
ttgaagataa gaaaggaaat gagagttgtt gacaggcaaa taagggatat ccaaagagaa
120
gaagaaaaag tgaaacgatc tgtgaaagat gctgccaaga agggccagaa ggatgtctgc
180
atagttctgg ccaaggagat gatcaggtca aggaaggctg tgagcaagct gtatgcatcc
240
aaagcacaca tgaactcagt gctcatgggg atgaagaacc agctcgcggt cttgcgagtg
300
gctggttccc tgcagaagag cacagaagtg atgaaggcca tgcaaagtct tgtgaagatt
360
ccagagattc aggccaccat gagggagttg tccaaagaaa tgatgaaggc tgggatcata
420
gaggagatgt agaggacac ttttgaaagc atggacgatc aggaagaaat ggaggaagaa
480
gcagaaatgg aaattgacag aattctcttt gaaattacag caggggcctt gggcaaagca
540
cccagtaaag tgactgatgc ccttccagag ccagaacctc caggagcgat ggctgcctca
600
gaggatgagg aggaggagga agaggctctg gaggccatgc agtcccggct ggccacactc
660
cgcagctagg ggctgcctac cccgctgggt gtgcacacac tcctctcaag agctgccatt
720
ttatgtgtct cttgcactac acctctgttg tgaggactac cattttggag aaggttctgt
780
ttgtctcttt tcattctctg cccaggtttt gggatcgcaa agggattgtt cttataaaag
840
tggcataaat aaatgcatca tttttaggag tatagacaga tatatcttat tgtggggagg
900
```

ggaaagaaat ccatctgctc atgaagcact tctgaaaata taggtgattg cctgaatgtc
960

gaagactcta cttttgtcta taaaacacta tataaatgaa ttttaataaa tttttgcttc
1020

agcacttggc cccattgtag attgccctgt gcagtaaact ttcaaggtgt cagctgcccc
1080

agattgcttc atttgctggg tgtggaaaga gttgctatgg ccaggcatat gggatttgga
1140

agctcagcag aagtgacttc tgctctgtgg ttgctgctcc ccggctttca cagacatggt
1200

atggcagcca ttcttttatc tatttaacca agaggatgct ggggaattgt gctgcttgtc
1260

ctgttggctg gtggctgcat tatgtccg
1288

<210> 5964
<211> 222
<212> PRT
<213> Homo sapiens

<400> 5964
Met Gly Leu Phe Gly Lys Thr Gln Glu Lys Pro Pro Lys Glu Leu Val
 1   5   10   15
Asn Glu Trp Ser Leu Lys Ile Arg Lys Glu Met Arg Val Val Asp Arg
                20   25   30
Gln Ile Arg Asp Ile Gln Arg Glu Glu Glu Lys Val Lys Arg Ser Val
            35   40   45
Lys Asp Ala Ala Lys Lys Gly Gln Lys Asp Val Cys Ile Val Leu Ala
        50   55   60
Lys Glu Met Ile Arg Ser Arg Lys Ala Val Ser Lys Leu Tyr Ala Ser
65   70   75   80
Lys Ala His Met Asn Ser Val Leu Met Gly Met Lys Asn Gln Leu Ala
                85   90   95
Val Leu Arg Val Ala Gly Ser Leu Gln Lys Ser Thr Glu Val Met Lys
            100   105   110
Ala Met Gln Ser Leu Val Lys Ile Pro Glu Ile Gln Ala Thr Met Arg
            115   120   125
Glu Leu Ser Lys Glu Met Met Lys Ala Gly Ile Ile Glu Glu Met Leu
        130   135   140
Glu Asp Thr Phe Glu Ser Met Asp Asp Gln Glu Glu Met Glu Glu Glu
145   150   155   160
Ala Glu Met Glu Ile Asp Arg Ile Leu Phe Glu Ile Thr Ala Gly Ala
                165   170   175
Leu Gly Lys Ala Pro Ser Lys Val Thr Asp Ala Leu Pro Glu Pro Glu
            180   185   190
Pro Pro Gly Ala Met Ala Ala Ser Glu Asp Glu Glu Glu Glu Glu Glu
            195   200   205
Ala Leu Glu Ala Met Gln Ser Arg Leu Ala Thr Leu Arg Ser
        210   215   220

<210> 5965
<211> 1011
<212> DNA
<213> Homo sapiens

<400> 5965
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ccgcgccgct ccctgtacaa actggtgggc tcgccgcctt ggaaagaggc tttccggcag
120
agatgcctgg agagaatgag aaacagccgg gacaggctcc taaacaggta ccgccaggct
180
ggaagcagtg ggccagggaa ttctcagaac agctttctag ttcaagaggt gatggaagaa
240
gagtggaatg ctttgcagnn tcagtggnag aattgtccag aagacttggc tcagttggag
300
gagctgatag acatggctgt gctggaggaa attcaacagg agctgatcaa ccaagagcag
360
tccatcatca gcgagtatga gaagagcttg cagtttgatg aaaagtgtct cagcatcatg
420
ctggctgagt gggaggcaaa cccactcatc tgtcctgtat gtacaaagta caacctgaga
480
atcacaagcg gtgtggtggt gtgtcagtgt ggcctgtcca tcccatctca ttcttctgag
540
ttgacagagc agaagcttcg tgcctgttta gagggtagta taaatgagca cagtgcacat
600
tgtccccaca cacctgaatt ttcagtcact ggaggaacag aagaaaagtc cagtcttctc
660
atgagctgtc tggcctgtga tacttgggct gtgatcctct agagccagct tggactcaca
720
tcattctatg gggttgaaga caactcattc cctctgagga gccttgtaca tacaagcctt
780
ttatttataa cttattttgt attgaaactt ttaaacaata ctgaagaaaa aaaaactttt
840
ccgacatctg ttcttggtct tttgtgacgc aggttgaagg gggaggaata gaaaaagaca
900
aactgccttg gaggagataa accaatttta tgtctatcat gttatacaaa aatctagaaa
960
taatagattt gtacagaaaa aaatgataat aaatgagaac acaaaacata t
1011

<210> 5966
<211> 233
<212> PRT
<213> Homo sapiens

<400> 5966
Gly Asn Gly Ser Cys Gly Phe Val Ser Arg Glu Glu Glu Met Ala Glu
1   5   10   15
Ser Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys Leu Val Gly Ser Pro
            20   25   30
Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu Glu Arg Met Arg Asn
            35   40   45
Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln Ala Gly Ser Ser Gly
        50   55   60
Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln Glu Val Met Glu Glu
65   70   75   80
Glu Trp Asn Ala Leu Gln Xaa Gln Trp Xaa Asn Cys Pro Glu Asp Leu

5143

```
                    85                  90                  95
Ala Gln Leu Glu Glu Leu Ile Asp Met Ala Val Leu Glu Glu Ile Gln
                100                 105                 110
Gln Glu Leu Ile Asn Gln Glu Gln Ser Ile Ile Ser Glu Tyr Glu Lys
            115                 120                 125
Ser Leu Gln Phe Asp Glu Lys Cys Leu Ser Ile Met Leu Ala Glu Trp
        130                  135                140
Glu Ala Asn Pro Leu Ile Cys Pro Val Cys Thr Lys Tyr Asn Leu Arg
145                 150                 155                 160
Ile Thr Ser Gly Val Val Val Cys Gln Cys Gly Leu Ser Ile Pro Ser
                165                 170                 175
His Ser Ser Glu Leu Thr Glu Gln Lys Leu Arg Ala Cys Leu Glu Gly
            180                 185                 190
Ser Ile Asn Glu His Ser Ala His Cys Pro His Thr Pro Glu Phe Ser
        195                 200                 205
Val Thr Gly Gly Thr Glu Glu Lys Ser Ser Leu Leu Met Ser Cys Leu
    210                 215                 220
Ala Cys Asp Thr Trp Ala Val Ile Leu
225                 230
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<210> 5967
<211> 1806
<212> DNA
<213> Homo sapiens

<400> 5967

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nattttaat ctcttttaaa aaaactcaat ttttttttc acttactgat taaatcttga
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gtcttttgcc tccagtggat cagtgatttt tcagcagaaa atctttcctc tccattgctt
120
tgtgcttttg ttgctaggca gtcaacagca gggctactaa agcacttcta atttagacaa
180
atcttttcct ctatttaga aatggatttc aatggtgttc agtttgtttg cagaaaccta
240
ctgaaagtga gcatgttttt gaacacatta acaccgaagt tctacgtggc cctaacaggc
300
acttcctcac taatatcagg gcttattttg atatttgaat ggtggtattt tcgcaaatac
360
ggaacttcat tcattgaaca agtctcagta agccacttgc gccccttct gggaggggtt
420
gacaacaact cttccaacaa ttctaattcc agtaacgggg actcagattc aataggcaa
480
agtgtctcag aatgcaaagt atggcgaaat ccactaaatt tatttagggg tgctgaatac
540
aatcggtata cttgggtgac aggacgagag cctcttactt actatgacat gaatctctct
600
gcccaagacc accagacatt ctttacttgt gactcggacc atctgcgtcc cgcagatgca
660
ataatgcaga aagcctggag agagagaaac ccccaagcta ggatttctgc agctcatgaa
720
gccttggaga taaatgagac gagacaccaa tgtcttggtg tacatcaaaa gaaggctagc
780
aatgtgtgcc agaagactcg ggaggaccag ggaagcaaag cccttctgga actacaagca
840
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tatgctgatg ttcaggcagt cttagcaaag tatgatgata taagcttacc aaagtcagca
900
acaatatgct acacagctgc tttgctcaaa gcaagagctg tctctgacaa attctctcct
960
gaggctgcat ctcggcgggg gctgagcaca gcagagatga atgcagtaga ggccattcat
1020
agagctgtgg aattcaatcc tcatgtgcca aaatacctac tagaaatgaa aagcttaatc
1080
ctaccccag aacatatcct gaagagagga gacagtgaag caatagcata tgcattcttt
1140
catcttgcac actggaagag agtggaaggg gctttgaatc ttttgcattg tacgtgggaa
1200
ggcactttc ggatgatccc ttatcccttg gaaaaggggc acctatttta tccttaccca
1260
atctgtacag aaacagcaga ccgagagctg cttccatctt tccatgaagt ctcagtttac
1320
ccaaagaagg agcttccctt ctttattctc tttactgctg gattatgttc cttcacagcc
1380
atgctggccc tcctgacaca tcagttcccg gaacttatgg gggtcttcgc aaaagctgtg
1440
agtgtttgcc tagagggagg ccttggggaa tggatgggga aagccaaggg cataaaagca
1500
gcgtgagaga atggggttg ccttacagaa atgggtacga gcctgcaaag atcattgctc
1560
accatttaat tttcatgatc gtcaatggaa tcaaagcatt aagggtcaaa tgagaaagtg
1620
caggttgtta ctgcatgcct tgcctcattt cacaacaaat tcttagcagt ttccaaaaaa
1680
tgcaggaggt ccaaaaggat ggaatgattt aggaaatcct agcaaatgaa aatgtgtggg
1740
aagttactcg gttttctgta aattgaatga cattatttcc aatcgttgga tattgtgggt
1800
ctttcc
1806

<210> 5968
<211> 434
<212> PRT
<213> Homo sapiens

<400> 5968
Met Asp Phe Asn Gly Val Gln Phe Val Cys Arg Asn Leu Leu Lys Val
1   5   10   15
Ser Met Phe Leu Asn Thr Leu Thr Pro Lys Phe Tyr Val Ala Leu Thr
                20   25   30
Gly Thr Ser Ser Leu Ile Ser Gly Leu Ile Leu Ile Phe Glu Trp Trp
            35   40   45
Tyr Phe Arg Lys Tyr Gly Thr Ser Phe Ile Glu Gln Val Ser Val Ser
        50   55   60
His Leu Arg Pro Leu Leu Gly Gly Val Asp Asn Asn Ser Ser Asn Asn
65   70   75   80
Ser Asn Ser Ser Asn Gly Asp Ser Asp Ser Asn Arg Gln Ser Val Ser
                85   90   95
Glu Cys Lys Val Trp Arg Asn Pro Leu Asn Leu Phe Arg Gly Ala Glu

```
                     100                        105                       110
Tyr Asn Arg Tyr Thr Trp Val Thr Gly Arg Glu Pro Leu Thr Tyr Tyr
             115                       120                  125
Asp Met Asn Leu Ser Ala Gln Asp His Gln Thr Phe Phe Thr Cys Asp
        130                       135                  140
Ser Asp His Leu Arg Pro Ala Asp Ala Ile Met Gln Lys Ala Trp Arg
145                       150                  155                  160
Glu Arg Asn Pro Gln Ala Arg Ile Ser Ala Ala His Glu Ala Leu Glu
                  165                  170                       175
Ile Asn Glu Thr Arg His Gln Cys Leu Gly Val His Gln Lys Lys Ala
             180                  185                  190
Ser Asn Val Cys Gln Lys Thr Arg Glu Asp Gln Gly Ser Lys Ala Leu
        195                  200                  205
Leu Glu Leu Gln Ala Tyr Ala Asp Val Gln Ala Val Leu Ala Lys Tyr
   210                  215                  220
Asp Asp Ile Ser Leu Pro Lys Ser Ala Thr Ile Cys Tyr Thr Ala Ala
225                  230                  235                  240
Leu Leu Lys Ala Arg Ala Val Ser Asp Lys Phe Ser Pro Glu Ala Ala
                  245                  250                  255
Ser Arg Arg Gly Leu Ser Thr Ala Glu Met Asn Ala Val Glu Ala Ile
             260                  265                  270
His Arg Ala Val Glu Phe Asn Pro His Val Pro Lys Tyr Leu Leu Glu
        275                  280                  285
Met Lys Ser Leu Ile Leu Pro Pro Glu His Ile Leu Lys Arg Gly Asp
   290                  295                  300
Ser Glu Ala Ile Ala Tyr Ala Phe Phe His Leu Ala His Trp Lys Arg
305                  310                  315                  320
Val Glu Gly Ala Leu Asn Leu Leu His Cys Thr Trp Glu Gly Thr Phe
                  325                  330                  335
Arg Met Ile Pro Tyr Pro Leu Glu Lys Gly His Leu Phe Tyr Pro Tyr
             340                  345                  350
Pro Ile Cys Thr Glu Thr Ala Asp Arg Glu Leu Leu Pro Ser Phe His
        355                  360                  365
Glu Val Ser Val Tyr Pro Lys Lys Glu Leu Pro Phe Phe Ile Leu Phe
   370                  375                  380
Thr Ala Gly Leu Cys Ser Phe Thr Ala Met Leu Ala Leu Leu Thr His
385                  390                  395                  400
Gln Phe Pro Glu Leu Met Gly Val Phe Ala Lys Ala Val Ser Val Cys
                  405                  410                  415
Leu Glu Gly Gly Leu Gly Glu Trp Met Gly Lys Ala Lys Gly Ile Lys
             420                  425                  430
Ala Ala
```

<210> 5969
<211> 429
<212> DNA
<213> Homo sapiens

<400> 5969
cggccgcccg tgtgtgacgt cagggagctg caggcccagg aagccttgca gaacggccag
60
ctgggcggcg gggaaggggt cccggatctg cagcctgggg tcttggccag ccaggccatg
120

5146

attgagaaga tcctgagcga ggacccccgg tggcaagatg ccaacttcgt gctgggcagc
180
tacaagacgg agcagtgccc gaagccgcca cgcctgtgcc gccagggcta tgcgtgccca
240
cactaccaca atagccggga caggcggcgc aacccccggc ggttccagta caggtccacg
300
ccctgcccca gcgtgaagca cggggatgag tggggggaac cctcacgctg cgatggcggc
360
gacggctgcc agtattgcca ctcccgcacg gagcagcagt tccatcccga gatctacaaa
420
tctacaaaa
429

<210> 5970
<211> 143
<212> PRT
<213> Homo sapiens

<400> 5970

```
Arg Pro Pro Val Cys Asp Val Arg Glu Leu Gln Ala Gln Glu Ala Leu
1               5                   10                  15
Gln Asn Gly Gln Leu Gly Gly Gly Glu Gly Val Pro Asp Leu Gln Pro
            20                  25                  30
Gly Val Leu Ala Ser Gln Ala Met Ile Glu Lys Ile Leu Ser Glu Asp
        35                  40                  45
Pro Arg Trp Gln Asp Ala Asn Phe Val Leu Gly Ser Tyr Lys Thr Glu
    50                  55                  60
Gln Cys Pro Lys Pro Pro Arg Leu Cys Arg Gln Gly Tyr Ala Cys Pro
65                  70                  75                  80
His Tyr His Asn Ser Arg Asp Arg Arg Arg Asn Pro Arg Arg Phe Gln
                85                  90                  95
Tyr Arg Ser Thr Pro Cys Pro Ser Val Lys His Gly Asp Glu Trp Gly
            100                 105                 110
Glu Pro Ser Arg Cys Asp Gly Gly Asp Gly Cys Gln Tyr Cys His Ser
            115                 120                 125
Arg Thr Glu Gln Gln Phe His Pro Glu Ile Tyr Lys Ser Thr Lys
    130                 135                 140
```

<210> 5971
<211> 565
<212> DNA
<213> Homo sapiens

<400> 5971
gcgcgcccat ttcggagagt tccctcagcc ccaggactct ggatgtagcc gttttcatgc
60
tgtgaatagc acagtcttcc ctttcatgtg gcactgaagt taaaatgcat agagctcttt
120
catgtccctt aggtcagcta agcccacatc agtgtccaaa taggcaacat ccctatttta
180
tagatggtca tccccatttt agagatagct cccttttata tccccatttt acaggtgaag
240
gaattgaggc acagaaggtt aggtcacttc tgcaagatga ccagctgaac caaaatttca
300

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gggcttcaaa caccaaatgt gttcctttgt cttccgtttc ccacttgctt cccagaggct
360
cagcaagtag cctctggcca ctgagcatcc tcccgcccac tttgctccct gcctcctgat
420
cccaggactg tggccgtgga tgccagagcg aggatgtgaa tcctgttggg ttctgaagcc
480
cacacctacc ctcagccttg aagctgcagc aatggctgct tccagatgag cacaccctcg
540
gggtgcangc gtccagtgtc acgat
565
```

```
<210> 5972
<211> 104
<212> PRT
<213> Homo sapiens
```

```
<400> 5972
Met His Arg Ala Leu Ser Cys Pro Leu Gly Gln Leu Ser Pro His Gln
  1               5                  10                  15
Cys Pro Asn Arg Gln His Pro Tyr Phe Ile Asp Gly His Pro His Phe
             20                  25                  30
Arg Asp Ser Ser Leu Leu Tyr Pro His Phe Thr Gly Glu Gly Ile Glu
         35                  40                  45
Ala Gln Lys Val Arg Ser Leu Leu Gln Asp Asp Gln Leu Asn Gln Asn
     50                  55                  60
Phe Arg Ala Ser Asn Thr Lys Cys Val Pro Leu Ser Ser Val Ser His
65                  70                  75                  80
Leu Leu Pro Arg Gly Ser Ala Ser Ser Leu Trp Pro Leu Ser Ile Leu
                 85                  90                  95
Pro Pro Thr Leu Leu Pro Ala Ser
                100
```

```
<210> 5973
<211> 797
<212> DNA
<213> Homo sapiens
```

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<400> 5973
gggcccaggg gcggctttcc caacactggt cgcagtcatt gttggtataa cggctagaga
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cgcccagtga gttagcatgg agggcagtgg gaccggaaaa agacgtggaa aagctgcgaa
120
aacgagcctt cgaatcatgg acgcgcgggc ccagctcctc ctccgagttc ctcatccggg
180
gccgtcactc acatccgggg ccctcactca catccgggac cctcatccgg ggctctcacc
240
cacatccggg accctcatgc ctgggcggag gagggggggc ccttcattcg ggacccctgc
300
actccgtcgc cggaagtgcc accgagaagc gccggcctcg gggctgtcta cagcggcccg
360
ggagaggctg tggtggcccc gagcgcgagt gtgtaggtga caggacagcg gccaggcccg
420
cccctcccct cggtgagtac ccggaagccg ttttggggtc gcagcggggt ggcagcttgt
480
```

tttgccttca cgggagtaga aggaggcggc gtccgccgcg gccgacggta gttcgcttcc
540
ccgagagtgc gcggaggccc gggtgcgagg agggcctgtt tctcttcagc cctggttcat
600
tcacctcgcg gaccgagggc ccgccgtcag gagccggcga ccgtgccctg gtgcgagctg
660
gtctgtatgt cctcactggt ccttttggga ctttgccttg gcctcgttgc tctcaggatt
720
ccgggaaaag gccggtctag ctggtctgag ttagcgaagg gcctgacccc aaaagtggat
780
tttcctcgtt ccgaatt
797

<210> 5974
<211> 107
<212> PRT
<213> Homo sapiens

<400> 5974
Met Glu Gly Ser Gly Thr Gly Lys Arg Arg Gly Lys Ala Ala Lys Thr
1   5   10   15
Ser Leu Arg Ile Met Asp Ala Arg Ala Gln Leu Leu Leu Arg Val Pro
                20   25   30
His Pro Gly Pro Ser Leu Thr Ser Gly Ala Leu Thr His Ile Arg Asp
            35   40   45
Pro His Pro Gly Leu Ser Pro Thr Ser Gly Thr Leu Met Pro Gly Arg
        50   55   60
Arg Arg Gly Gly Pro Ser Phe Gly Thr Pro Ala Leu Arg Arg Arg Lys
65   70   75   80
Cys His Arg Glu Ala Pro Ala Ser Gly Leu Ser Thr Ala Ala Arg Glu
                85   90   95
Arg Leu Trp Trp Pro Arg Ala Arg Val Cys Arg
                100   105

<210> 5975
<211> 2175
<212> DNA
<213> Homo sapiens

<400> 5975
nntcaggtca ccacatacta ttatgttggg tttgcatatt tgatgatgcg tcgttaccag
60
gatgccatcc gggtcttcgc caacatcctc ctctacatcc agaggaccaa gagcatgttc
120
cagagggcca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
180
ctggccattg ccctcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
240
cgggagaaat atggggacaa gatgttgcgc atgtcttatc ccgctgatga ttatgagtct
300
gaggcggctt atgaccccta cgcttatccc agcgactatg atatgcacac aggagatcca
360
aagcaggacc ttgcttatga acgtcagtat gaacagcaaa cctatcaggt gatccctgag
420

5149

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gtgatcaaaa acttcatcca gtatttccac aaaactgtct cagatttgat tgaccagaaa
480
gtgtatgagc tacaggccag tcgtgtctcc agtgatgtca ttgaccagaa ggtgtatgag
540
atccaggaca tctatgagaa cagctggacc aagctgactg aaagattctt caagaataca
600
ccttggcccg aggctgaagc cattgctcca caggttggca atgatgctgt cttcctgatt
660
ttatacaaag aattatacta caggcacata tatgccaaag tcagtggggg accttccttg
720
gagcagaggt ttgaatccta ttacaactac tgcaatctct tcaactacat tcttaatgcc
780
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840
atctaccagt ttcagtcatt cagtcagtac cgctgtaaga ctgccaagaa gtcagaggag
900
gagattgact ttcttcgttc caatcccaaa atctggaatg ttcatagtgt cctcaatgtc
960
cttcattccc tggtagacaa atccaacatc aaccgacagt tggaggtata cacaagcgga
1020
ggtgaccctg agagtgtggc tggggagtat gggcggcact ccctctacaa aatgcttggt
1080
tacttcagcc tggtcgggct tctccgcctg cactccctgt taggagatta ctaccaggcc
1140
atcaaggtgc tggagaacat cgaactgaac aagaagagta tgtattcccg tgtgccagag
1200
tgccaggtca ccacatacta ttatgttggg tttgcatatt tgatgatgcg tcgttaccag
1260
gatgccatcc gggtcttcgc caacatcctc ctctacatcc agaggaccaa gagcatgttc
1320
cagaggacca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
1380
ctggccattg ccctcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
1440
cgggagaaat atggggacaa gatgttgcgc atgcagaaag gtgacccaca agtctatgaa
1500
gaacttttca gttactcctg ccccaagttc ctgtcgcctg tagtgcccaa ctatgataat
1560
gtgcacccca actaccacaa agagcccttc ctgcagcagc tgaaggtgtt ttctgatgaa
1620
gtacagcagc aggcccagct ttcaaccatc cgcagcttcc tgaagctcta caccaccatg
1680
cctgtggcca agctggctgg cttcctggac ctcacagagc aggagttccg gatccagctt
1740
cttgtcttca aacacaagat gaagaacctc gtgtggacca gcggtatctc agccctggat
1800
ggtgaatttc agtcagcctc agaggttgac ttctacattg ataaggacat gatccacatc
1860
gcggacacca aggtcgccag gcgttatggg gatttcttca tccgtcagat ccacaaattt
1920
gaggagctta tcgaaccct gaagaagatg ggacagagac cttgatgata ttcacacaca
1980
ttcaggaacc tgttttgatg tattataggc aggaagtgtt tttgctaccg tgaaaccttt
2040
```

acctagatca gccatcagcc tgtcaactca gttaacaagt taaggaccga agtgtttcaa
2100
gtggatctca gtaaaggatc tttggagcca gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2160
aaaaaaaaaa aaaaa
2175

<210> 5976
<211> 564
<212> PRT
<213> Homo sapiens

<400> 5976
Met Ser Tyr Pro Ala Asp Asp Tyr Glu Ser Glu Ala Ala Tyr Asp Pro
1   5   10   15
Tyr Ala Tyr Pro Ser Asp Tyr Asp Met His Thr Gly Asp Pro Lys Gln
            20   25   30
Asp Leu Ala Tyr Glu Arg Gln Tyr Glu Gln Gln Thr Tyr Gln Val Ile
        35   40   45
Pro Glu Val Ile Lys Asn Phe Ile Gln Tyr Phe His Lys Thr Val Ser
    50   55   60
Asp Leu Ile Asp Gln Lys Val Tyr Glu Leu Gln Ala Ser Arg Val Ser
65   70   75   80
Ser Asp Val Ile Asp Gln Lys Val Tyr Glu Ile Gln Asp Ile Tyr Glu
                85   90   95
Asn Ser Trp Thr Lys Leu Thr Glu Arg Phe Phe Lys Asn Thr Pro Trp
            100   105   110
Pro Glu Ala Glu Ala Ile Ala Pro Gln Val Gly Asn Asp Ala Val Phe
        115   120   125
Leu Ile Leu Tyr Lys Glu Leu Tyr Tyr Arg His Ile Tyr Ala Lys Val
    130   135   140
Ser Gly Gly Pro Ser Leu Glu Gln Arg Phe Glu Ser Tyr Tyr Asn Tyr
145   150   155   160
Cys Asn Leu Phe Asn Tyr Ile Leu Asn Ala Asp Gly Pro Ala Pro Leu
            165   170   175
Glu Leu Pro Asn Gln Trp Leu Trp Asp Ile Ile Asp Glu Phe Ile Tyr
            180   185   190
Gln Phe Gln Ser Phe Ser Gln Tyr Arg Cys Lys Thr Ala Lys Lys Ser
        195   200   205
Glu Glu Glu Ile Asp Phe Leu Arg Ser Asn Pro Lys Ile Trp Asn Val
    210   215   220
His Ser Val Leu Asn Val Leu His Ser Leu Val Asp Lys Ser Asn Ile
225   230   235   240
Asn Arg Gln Leu Glu Val Tyr Thr Ser Gly Gly Asp Pro Glu Ser Val
            245   250   255
Ala Gly Glu Tyr Gly Arg His Ser Leu Tyr Lys Met Leu Gly Tyr Phe
            260   265   270
Ser Leu Val Gly Leu Leu Arg Leu His Ser Leu Leu Gly Asp Tyr Tyr
        275   280   285
Gln Ala Ile Lys Val Leu Glu Asn Ile Glu Leu Asn Lys Lys Ser Met
    290   295   300
Tyr Ser Arg Val Pro Glu Cys Gln Val Thr Thr Tyr Tyr Tyr Val Gly
305   310   315   320
Phe Ala Tyr Leu Met Met Arg Arg Tyr Gln Asp Ala Ile Arg Val Phe

```
                    325                 330                 335
Ala Asn Ile Leu Leu Tyr Ile Gln Arg Thr Lys Ser Met Phe Gln Arg
            340                 345                 350
Thr Thr Tyr Lys Tyr Glu Met Ile Asn Lys Gln Asn Glu Gln Met His
            355                 360                 365
Ala Leu Leu Ala Ile Ala Leu Thr Met Tyr Pro Met Arg Ile Asp Glu
        370                 375                 380
Ser Ile His Leu Gln Leu Arg Glu Lys Tyr Gly Asp Lys Met Leu Arg
385                 390                 395                 400
Met Gln Lys Gly Asp Pro Gln Val Tyr Glu Glu Leu Phe Ser Tyr Ser
            405                 410                 415
Cys Pro Lys Phe Leu Ser Pro Val Val Pro Asn Tyr Asp Asn Val His
            420                 425                 430
Pro Asn Tyr His Lys Glu Pro Phe Leu Gln Gln Leu Lys Val Phe Ser
            435                 440                 445
Asp Glu Val Gln Gln Gln Ala Gln Leu Ser Thr Ile Arg Ser Phe Leu
        450                 455                 460
Lys Leu Tyr Thr Thr Met Pro Val Ala Lys Leu Ala Gly Phe Leu Asp
465                 470                 475                 480
Leu Thr Glu Gln Glu Phe Arg Ile Gln Leu Leu Val Phe Lys His Lys
            485                 490                 495
Met Lys Asn Leu Val Trp Thr Ser Gly Ile Ser Ala Leu Asp Gly Glu
            500                 505                 510
Phe Gln Ser Ala Ser Glu Val Asp Phe Tyr Ile Asp Lys Asp Met Ile
            515                 520                 525
His Ile Ala Asp Thr Lys Val Ala Arg Arg Tyr Gly Asp Phe Phe Ile
        530                 535                 540
Arg Gln Ile His Lys Phe Glu Glu Leu Asn Arg Thr Leu Lys Lys Met
545                 550                 555                 560
Gly Gln Arg Pro
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<210> 5977
<211> 2320
<212> DNA
<213> Homo sapiens

<400> 5977
naactttctt tagatttgtc tttgcttttt ccaacttcct ttatttctat tatacttata
60
attttgcttt ttgccctatc tttcattaga aacttttcgc aaatgtctgt taaatgctac
120
cccagtgact ttgggcttgg tcatgctact tgctttggtc aatgaaatgt gagtagacat
180
caagtatacc accatcacac agaaattta ttttttattt tattttttat agagacaggg
240
tctcactaca ttgcctagat tggtctcaaa ctcctgggct caagcaatct tcctcttctt
300
ggcctcccaa agtgttggga ttgcaggtgt gcgccactac gcccagcttg aaaaattttt
360
taatgcatgt ggtaatccac aggagatcac atttagtata tgaccaagtt aattaagaag
420
tcaaaaaaca cgttaaattt aagcagaata aggctgggtt cggtggctca tgcctgtgat
480
```

```
cccagcactt tgggaggcag aggtgggcag atcattnagg ccaggagttc gagaccagcc
540
tggacaacat ggcganaagt ctttactaaa aatacaaaaa tcagctgggc gtggtggtac
600
acacccgtga tcccagctac tcaggaggct taggcacatg atncgcttga acctgggaga
660
tggaagctgc agtaagctag atcctgccac tgtactccag cctgggtgac agatcaagac
720
tctaactaaa aaacccccca aaaacaaat agttacttgg aaaacttccg acatttattt
780
acttctggac aaacaaatga gtgggaagaa tcaagtatac acctcttaat tgtatttttt
840
tttttttttg agacagagtc ttgctctgtc gcccaggctg gagtacagtg gacgatctca
900
gctcactgca acctttgcct cccgggttca ggtgattctc ctgcctcagc ctcccgagta
960
gccgggatta taggcatgga gaaccacacc tggctagttt ttgtattttt agtagagatg
1020
aagtttcacc atgttggcct ggctggtctc aaactcctga cctcaagtga tctgcccgcc
1080
tggtctccta aagtgttggg attacaggcg tgagccaccg tgcctggcca atgttagttt
1140
ttatccttaa aattgcctga gttcttagaa cacagaaaaa acaaatttga atgcattttt
1200
aacagcttaa taatttatat gtcccattat gattttagcg gaatgtttta aagcaaagca
1260
taattcactg caaagataaa cctgaaaaag caaacaaact tacaaatggt atgttatgac
1320
ctagacaaaa ctgattatca actagtaata ctcataatta gcacatgcaa cagattgaga
1380
aattaaatcc tgtgctatat actcttaagt attttgtcag atatatcttt aaatgttcta
1440
tcaattgcat tcctttccac acatatttta aacaagaaaa caattgtctt tcctccagat
1500
tctcatgttt atcagtgcaa aacgttgcaa tctcagtaaa aatggtttat tacaatgtta
1560
ttttagaaag gcttagtcct caaactgttg aaaatgtact taaaagatgt ccaaatcatg
1620
agaatgatca acttcaatgg cttcctctgc ctccaacttg gcttctgcat gtccttcctg
1680
tgactcatca agagaggcca aggcctcatt cgtgtcactt gcaaaagttt ctcgtgatgt
1740
atcatcatct tcttgaaaat ttagactttt aatagcttgt ttcatctttt tccccaacac
1800
ttgtgttctc ctcttcctag cagctttttt attttcatat tccttttggt tttcaatgta
1860
gaaaatgtcc ttaatttgtt cctcgctgat actaggagtg tttttcaaga gattcagaaa
1920
aactccacct ggtgttcttc ttcgactacc attcattata aagagaccac cattttgttc
1980
aacttcagcg gtttccatca gaagttcaat tgcctttttg ttaccaataa tcctcactac
2040
tcgggctatc aggtctttct ttggttcctg taacctgaat gaaatttcat cagccacttt
2100
```

```
ctcttgagaa tcttccgctg tgatctcgta tcgaccttta tagttcattt ctggtctgtt
2160
ccctagcctg tctttgacag gtcgtttcct tttgagatga ccttgcccat tttcctcttc
2220
ctttgatccc attttttgc caccatgcat atattcatct agttccttgt ctagatcctt
2280
tgtatgctct tgagattcct tcctaagttt cttggcaagc
2320
```

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<210> 5978
<211> 77
<212> PRT
<213> Homo sapiens
```

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<400> 5978
Met Thr Lys Leu Ile Lys Lys Ser Lys Asn Thr Leu Asn Leu Ser Arg
1               5                   10                  15
Ile Arg Leu Gly Ser Val Ala His Ala Cys Asp Pro Ser Thr Leu Gly
            20                  25                  30
Gly Arg Gly Gly Gln Ile Ile Xaa Ala Arg Ser Ser Arg Pro Ala Trp
            35                  40                  45
Thr Thr Trp Arg Xaa Val Phe Thr Lys Asn Thr Lys Ile Ser Trp Ala
        50                  55                  60
Trp Trp Tyr Thr Pro Val Ile Pro Ala Thr Gln Glu Ala
65                  70                  75
```

```
<210> 5979
<211> 1095
<212> DNA
<213> Homo sapiens
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<400> 5979
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60
ctcggctcac tgtagccttg acctcctggg ctcaagcgat ctccgcctca gcctcccgag
120
tagctgcgac cacaggcctg tgcagcactc ctggcttgct gcccattgta tagatgagga
180
aattgaggcc taaggcaggg tcacttgcct ggccccttcc ccttcacccg tcagagtcca
240
gacagggagg ggacgtcccc tgaccccgc tgctctgtgc tttcagggca agaagactat
300
gaccggctgc ggcccctgtc ctaccagaac acccacctcg tgctcatctg ctatgacgtc
360
atgaatccca ccagctacga caacgtcctc atcaagtggt tccctgaggt cacgcatttc
420
tgccgcggga tccccatggt gctcatcggc tgcaagacag acctgaggaa ggacaaggag
480
cagctgcgga agctccgggc cgcccagctg agcccatca cctacatgca gggcctgagc
540
gcctgcgaac agatccgagc tgctctctac ctggaatgtt ccgccaagtt cgggagaat
600
gtggaggacg tcttccggga ggccgccaag gtggctctca gcgctctgaa gaaggcgcaa
660
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cggcagaaga agcgccggct ctgcctgctg ctctgaccca gggcagacag acctcacgac
720
agcactgaca gggcccgggg gcccaggtgc cgattgcacc agggaggctg ccccatcccg
780
accctccagc tcatggtgtc tggggcctgc ggctagactc ttggaacatt ctggaactct
840
ctcctttcct ggctggggct ctgaccacaa actccctcc aggctgcccc tgggacatgg
900
tggtgatgtg ggtgcaggag ccagtgtctg ttgttgggac tcgcaagtgc cctcatcaca
960
gccaccccca ccacgagtgt ctccccagtg cagactcaag ttatgcttga aatgaaaaag
1020
tctatctggt agtgggtaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1080
aaaaaaaaaa aaaaa
1095

<210> 5980
<211> 169
<212> PRT
<213> Homo sapiens

<400> 5980
Gly Leu Arg Gln Gly His Leu Pro Gly Pro Phe Pro Phe Thr Arg Gln
 1   5   10   15
Ser Pro Asp Arg Glu Gly Thr Ser Pro Asp Pro Arg Cys Ser Val Leu
            20   25   30
Ser Gly Gln Glu Asp Tyr Asp Arg Leu Arg Pro Leu Ser Tyr Gln Asn
            35   40   45
Thr His Leu Val Leu Ile Cys Tyr Asp Val Met Asn Pro Thr Ser Tyr
        50   55   60
Asp Asn Val Leu Ile Lys Trp Phe Pro Glu Val Thr His Phe Cys Arg
65   70   75   80
Gly Ile Pro Met Val Leu Ile Gly Cys Lys Thr Asp Leu Arg Lys Asp
                85   90   95
Lys Glu Gln Leu Arg Lys Leu Arg Ala Ala Gln Leu Glu Pro Ile Thr
            100   105   110
Tyr Met Gln Gly Leu Ser Ala Cys Glu Gln Ile Arg Ala Ala Leu Tyr
            115   120   125
Leu Glu Cys Ser Ala Lys Phe Arg Glu Asn Val Glu Asp Val Phe Arg
        130   135   140
Glu Ala Ala Lys Val Ala Leu Ser Ala Leu Lys Lys Ala Gln Arg Gln
145   150   155   160
Lys Lys Arg Arg Leu Cys Leu Leu Leu
                165

<210> 5981
<211> 677
<212> DNA
<213> Homo sapiens

<400> 5981
cgcttccccc agcccctgcg cccggcccga acgagaggtc cggagccccg gcgcgggcgg
60

```
gttctggggt gtagacgctg ctggccagcc ctccccagcc gaggttctcg gcaccgcctt
120
gagagcttca gctgccccag ggtgtgcagg tttgctttag agggtcggcg ggcggagctt
180
cggggaagag gagctctggg agagtcattc cggccagtgc gagtaccgtc gtcgctcttg
240
ggaatccttg gccgcccaga cagaagggaa gtaggcgccg agacccgtt ctgcattttg
300
attcatctcg ggccctgtaa gggtcatatc ttgtgaaaat aacctgtaaa atcaatttaa
360
cgttcagtgc agcgtgtaaa gacagctcta agaatttaaa agacgcctga gtcagaacat
420
ttaaatgctt gggtccctgt agcagcgttt taacacgtct gagtgcagag ggtggagaat
480
cgagcctgat tgccgttcac gccctgtaac ctttaagaag ggtaaagaaa ggcaccctaa
540
aaaacgcaag gggacactta ccctaggggt ggacgaacag ctagctttt ggaatttggg
600
ttggtcttca tttccaagtg cgaaatttgc ctgcaaaact ttttatttgc agtcatagat
660
caacgataaa cagaatt
677


<210> 5982
<211> 98
<212> PRT
<213> Homo sapiens

<400> 5982
Met Gln Asn Gly Ser Pro Ala Pro Thr Ser Leu Leu Ser Gly Arg Pro
1               5                   10                  15
Arg Ile Pro Lys Ser Asp Asp Gly Thr Arg Thr Gly Arg Asn Asp Ser
            20                  25                  30
Pro Arg Ala Pro Leu Pro Arg Ser Ser Ala Arg Arg Pro Ser Lys Ala
        35                  40                  45
Asn Leu His Thr Leu Gly Gln Leu Lys Leu Ser Arg Arg Cys Arg Glu
    50                  55                  60
Pro Arg Leu Gly Arg Ala Gly Gln Gln Arg Leu His Pro Arg Thr Arg
65                  70                  75                  80
Pro Arg Arg Gly Ser Gly Pro Leu Val Arg Ala Gly Arg Arg Gly Trp
                85                  90                  95
Gly Lys


<210> 5983
<211> 790
<212> DNA
<213> Homo sapiens

<400> 5983
gctcgacata tacagaatat ttcttcccca gaaagttctc caggaataaa gagacgcact
60
tatagtcaag aggtaagaag ttaacttaaa aagggtgaat tggtagtttt tttcctatta
120
```

```
cattgttttc cttaaattac tggtaaattt tgaaataaac agtcccaaga tgtgattatt
180
tgtgtaattt tttttttaa tttgtaaaca gggatatgac agatcttcaa ccatgttaac
240
attggggcct tttagaaatt ctaatttaac tgaactgggt ctgcaagaaa taaagactat
300
tggttatacg agccctagga gtaggactga agtcaacagg cagtgtcctg gagaaaagga
360
acctgtgtca gaccttcagc taggactcga tgcagttgag ccaactgccc tacataaaac
420
cctggaaacg cctgcacatg acagggctga gcccaacagc caactggact cgactcactc
480
tggacggggc acaatgtatt cttcctgggt aaagagccct gacagaacag gagttaactt
540
ctcagtgaac tccaacttga gggacctgac accctcgcat cagttggagg ttggaggagg
600
cttccgaata agtgagtcaa agtgcctgat gcaggatgat actagaggca tgtttatgga
660
aacaactgtg ttttgtactt ccgaagatgg gcttgtatct ggtttcggac ggactgttaa
720
tgacaatttg atcgacggga attgcacacc ccagaatcca ccacaaaaga aaaaggtttc
780
tctattagaa
790
```

<210> 5984
<211> 186
<212> PRT
<213> Homo sapiens

<400> 5984
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Met Leu Thr Leu Gly Pro Phe Arg Asn Ser Asn Leu Thr Glu Leu Gly
1               5                   10                  15
Leu Gln Glu Ile Lys Thr Ile Gly Tyr Thr Ser Pro Arg Ser Arg Thr
            20                  25                  30
Glu Val Asn Arg Gln Cys Pro Gly Glu Lys Glu Pro Val Ser Asp Leu
        35                  40                  45
Gln Leu Gly Leu Asp Ala Val Glu Pro Thr Ala Leu His Lys Thr Leu
    50                  55                  60
Glu Thr Pro Ala His Asp Arg Ala Glu Pro Asn Ser Gln Leu Asp Ser
65                  70                  75                  80
Thr His Ser Gly Arg Gly Thr Met Tyr Ser Ser Trp Val Lys Ser Pro
                85                  90                  95
Asp Arg Thr Gly Val Asn Phe Ser Val Asn Ser Asn Leu Arg Asp Leu
            100                 105                 110
Thr Pro Ser His Gln Leu Glu Val Gly Gly Gly Phe Arg Ile Ser Glu
        115                 120                 125
Ser Lys Cys Leu Met Gln Asp Asp Thr Arg Gly Met Phe Met Glu Thr
    130                 135                 140
Thr Val Phe Cys Thr Ser Glu Asp Gly Leu Val Ser Gly Phe Gly Arg
145                 150                 155                 160
Thr Val Asn Asp Asn Leu Ile Asp Gly Asn Cys Thr Pro Gln Asn Pro
                165                 170                 175
Pro Gln Lys Lys Lys Val Ser Leu Leu Glu
```

5157

```
                    180                    185

<210> 5985
<211> 737
<212> DNA
<213> Homo sapiens

<400> 5985
tgagcttggt ctttccgggc ctcgcttccc ccagcccctg cgcccggccc gaacgagagg
60
ttccggagcc ccggcgcggg cgggttctgg ggtgtagacg ctgctggcca gcccgcccca
120
gccgaggttc tcggcaccgc cttgagagct tcagctgccc cagggtgtgc agattagaat
180
cccaagaaaa tcaaatggca tccgggggatt tctgctcacc tggagaaggg atggaaatac
240
ttcaacaagt gtgcagcaaa caacttcctc cttgtaacct gagtaaagag gacctgttac
300
agaacccata cttcagcaag cttctcctga atctctcaca gcatgtggat gagagtggct
360
taagcctcac cctagcaaag gagcaggctc aggcatggaa ggaagttcga ctgcataaga
420
caacatggtt gaggtctgag attttacaca gagtcattca agagttgctt gtggactact
480
atgtgaagat acaagacaca aatgtaactt ctgaggacaa aaagtttcat gagacccttg
540
aacagcggct gcttgtaact gaactgatgc ggctcttagg tcctagccag gagagggaga
600
tacctccact gctggggctg gagaaagcgg accttctgga actcatgcca ctctcagagg
660
ttggcgggga gatattggaa ccaaataaat gaaatggttt aatttctccc atatctttaa
720
aaaaaaaaaa aaaaaaa
737


<210> 5986
<211> 165
<212> PRT
<213> Homo sapiens

<400> 5986
Met Ala Ser Gly Asp Phe Cys Ser Pro Gly Glu Gly Met Glu Ile Leu
1               5                   10                  15
Gln Gln Val Cys Ser Lys Gln Leu Pro Pro Cys Asn Leu Ser Lys Glu
            20                  25                  30
Asp Leu Leu Gln Asn Pro Tyr Phe Ser Lys Leu Leu Leu Asn Leu Ser
        35                  40                  45
Gln His Val Asp Glu Ser Gly Leu Ser Leu Thr Leu Ala Lys Glu Gln
    50                  55                  60
Ala Gln Ala Trp Lys Glu Val Arg Leu His Lys Thr Thr Trp Leu Arg
65                  70                  75                  80
Ser Glu Ile Leu His Arg Val Ile Gln Glu Leu Leu Val Asp Tyr Tyr
                85                  90                  95
Val Lys Ile Gln Asp Thr Asn Val Thr Ser Glu Asp Lys Lys Phe His
```

```
           100                  105                  110
Glu Thr Leu Glu Gln Arg Leu Leu Val Thr Glu Leu Met Arg Leu Leu
        115                  120                  125
Gly Pro Ser Gln Glu Arg Glu Ile Pro Pro Leu Leu Gly Leu Glu Lys
    130                  135                  140
Ala Asp Leu Leu Glu Leu Met Pro Leu Ser Glu Val Gly Gly Glu Ile
145                  150                  155                  160
Leu Glu Pro Asn Lys
                165
```

<210> 5987
<211> 1444
<212> DNA
<213> Homo sapiens

<400> 5987

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nnctggattg ggatgaagga ggctgaatct cagtcaggag ctgagctccc cagccagagg
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ggcatgtttt tttctccttg ttgtaatctc aaaggtcaca gcatctgctg aggaggcgac
120
caccgcgtgg agctttacaa ggtgctgagt tcccttggtt accatgtggt cacctttgac
180
tacagaggtt ggggtgactc agtgggaacg ccatctgagc ggggcatgac ctatgacgca
240
ctccacgttt ttgactggat caaagcaaga agtggtgaca accccgtgta catctggggc
300
cactctctgg gcactggcgt ggcgacaatc tggtgcggcg cctctgtgag cgagacgcct
360
ccagatgccc ttatattgga atctccattc actaatatcc gcgaagaagc taagagccat
420
ccattttcag tgatatatcg atacttccct gggtttgact ggttcttcct tgatcctatt
480
acaagtagtg gaattaaatt tgcaaatgat gaaaacgtga agcacatctc ctgtcccctg
540
ctcatcctgc acgctgagga cgacccggtg gtgcccttcc agcttggcag aaagctctat
600
agcatcgccg caccagctcg aagcttccga gatttcaaag ttcagtttgt gccctttcat
660
tcagaccttg gctacaggca caaatacatt tacaagagcc ctgagctgcc acggatactg
720
agggaattcc tggggaagtc ggagcctgag caccagcact gagcctggcc gtgggaagga
780
agcatgaaga cctctgccct cctcccgttt tcctccagtc agcagcccgg tatcctgaag
840
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900
gatcccaggt ggggaggccc ctgcaggcct gcagtgcccg gaggcctgag catggctgtg
960
tggaaagcgt gggtggcagg catgtggctc tccttgccgc ccctcaacct gagatcttgt
1020
tgggagactt aatggcagca ggcagccatc actgcctgct tgatgctgca ctgagctgga
1080
cagggggagt ccgggcaggg gactcttggg gctcgggacc atgctgagct ttttggcacc
1140
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```
acccacagag aacgtggggt ccaggttctt tctgcacctt cccagcacat gcagaatgac
1200
tccagtggtt ccatcgtccc ctcctgccct gtgtacctgc ttgcctttct cagctgcccc
1260
acctcccctg ggctggccca ctcacccaca gtggaagtgc ccgggatctg cacttcctcc
1320
cctttcacct acctgtacac ctaacctggc cttagactga gctttattta agaataaaat
1380
cgtggtggtg gtccttttgt ctcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1440
aaaa
1444
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<210> 5988
<211> 216
<212> PRT
<213> Homo sapiens

<400> 5988

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Gly Gly Asp His Arg Val Glu Leu Tyr Lys Val Leu Ser Ser Leu Gly
 1               5                  10                  15
Tyr His Val Val Thr Phe Asp Tyr Arg Gly Trp Gly Asp Ser Val Gly
             20                  25                  30
Thr Pro Ser Glu Arg Gly Met Thr Tyr Asp Ala Leu His Val Phe Asp
         35                  40                  45
Trp Ile Lys Ala Arg Ser Gly Asp Asn Pro Val Tyr Ile Trp Gly His
     50                  55                  60
Ser Leu Gly Thr Gly Val Ala Thr Ile Trp Cys Gly Ala Ser Val Ser
 65                  70                  75                  80
Glu Thr Pro Pro Asp Ala Leu Ile Leu Glu Ser Pro Phe Thr Asn Ile
                 85                  90                  95
Arg Glu Glu Ala Lys Ser His Pro Phe Ser Val Ile Tyr Arg Tyr Phe
            100                 105                 110
Pro Gly Phe Asp Trp Phe Phe Leu Asp Pro Ile Thr Ser Ser Gly Ile
            115                 120                 125
Lys Phe Ala Asn Asp Glu Asn Val Lys His Ile Ser Cys Pro Leu Leu
        130                 135                 140
Ile Leu His Ala Glu Asp Asp Pro Val Val Pro Phe Gln Leu Gly Arg
145                 150                 155                 160
Lys Leu Tyr Ser Ile Ala Ala Pro Ala Arg Ser Phe Arg Asp Phe Lys
                165                 170                 175
Val Gln Phe Val Pro Phe His Ser Asp Leu Gly Tyr Arg His Lys Tyr
            180                 185                 190
Ile Tyr Lys Ser Pro Glu Leu Pro Arg Ile Leu Arg Glu Phe Leu Gly
        195                 200                 205
Lys Ser Glu Pro Glu His Gln His
    210                 215
```

<210> 5989
<211> 1583
<212> DNA
<213> Homo sapiens

<400> 5989

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gcccctgat cagttctttg gggtgctttt taaagtttcc caggatcccg atgttgtcat
60
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<211> 260
<212> PRT
<213> Homo sapiens

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Pro Pro Ile Ser Cys Phe Tyr Cys Glu Cys Glu Glu Lys Arg Leu Cys
            35                  40                  45
Val Asn Thr His Val Trp Thr Lys Ser Lys Phe Met Gly Met Ser Val
        50                  55                  60
Gly Val Ser Met Ile Gly Glu Gly Val Leu Arg Leu Leu Glu His Gly
65                  70                  75                  80
Glu Glu Tyr Val Phe Thr Leu Pro Ser Ala Tyr Ala Arg Ser Ile Leu
                85                  90                  95
Thr Ile Pro Trp Val Glu Leu Gly Gly Lys Val Ser Ile Asn Cys Ala
            100                 105                 110
Lys Thr Gly Tyr Ser Ala Thr Val Ile Phe His Thr Lys Pro Phe Tyr
            115                 120                 125
Gly Gly Lys Val His Arg Val Thr Ala Glu Val Lys His Asn Pro Thr
        130                 135                 140
Asn Thr Ile Val Cys Lys Ala His Gly Glu Trp Asn Gly Thr Leu Glu
145                 150                 155                 160
Phe Thr Tyr Asn Asn Gly Glu Thr Lys Val Ile Asp Thr Thr Thr Leu
                165                 170                 175
Pro Val Tyr Pro Lys Lys Ile Arg Pro Leu Glu Lys Gln Gly Pro Met
            180                 185                 190
Glu Ser Arg Asn Leu Trp Arg Glu Val Thr Arg Tyr Leu Arg Leu Gly
        195                 200                 205
Asp Ile Asp Ala Ala Thr Glu Gln Lys Arg His Leu Glu Glu Lys Gln
    210                 215                 220
Arg Val Glu Glu Arg Lys Arg Glu Asn Leu Arg Thr Pro Trp Lys Pro
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Lys Tyr Phe Ile Gln Glu Gly Asp Gly Trp Val Tyr Phe Asn Pro Leu
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Trp Lys Ala His
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<211> 2440
<212> DNA
<213> Homo sapiens

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<211> 301
<212> PRT
<213> Homo sapiens

<400> 5992
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            20                  25                  30
Val Val Phe Asp Glu Ala Asp Arg Leu Phe Glu Met Gly Phe Ala Glu
        35                  40                  45
Gln Leu Gln Glu Ile Ile Ala Arg Leu Pro Gly Gly His Gln Thr Val
        50                  55                  60
Leu Phe Ser Ala Thr Leu Pro Lys Leu Leu Val Glu Phe Ala Arg Ala
65                  70                  75                  80
Gly Leu Thr Glu Pro Val Leu Ile Arg Leu Asp Val Asp Thr Lys Leu
                85                  90                  95
Asn Glu Gln Leu Lys Thr Ser Phe Phe Leu Val Arg Glu Asp Thr Lys
                100                 105                 110
Ala Ala Val Leu Leu His Leu Leu His Asn Val Val Arg Pro Gln Asp
            115                 120                 125
Gln Thr Val Val Phe Val Ala Thr Lys His His Ala Glu Tyr Leu Thr
        130                 135                 140
Glu Leu Leu Thr Thr Gln Xaa Val Ser Cys Ala His Ile Tyr Ser Ala
145                 150                 155                 160
Leu Asp Pro Thr Ala Arg Lys Ile Asn Leu Ala Lys Phe Thr Leu Gly
                165                 170                 175
Lys Cys Ser Thr Leu Ile Val Thr Asp Leu Ala Ala Arg Gly Leu Asp
                180                 185                 190
Ile Pro Leu Leu Asp Asn Val Ile Asn Tyr Ser Phe Pro Ala Lys Gly
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         195                      200                      205
Lys Leu Phe Leu His Arg Val Gly Arg Val Ala Arg Ala Gly Arg Ser
    210                      215                      220
Gly Thr Ala Tyr Ser Leu Val Ala Pro Asp Glu Ile Pro Tyr Leu Leu
225                      230                      235                      240
Asp Leu His Leu Phe Leu Gly Arg Ser Leu Xaa Pro Arg Pro Thr Pro
                    245                      250                      255
Gln Gly Ala Leu Arg Cys Gly Arg Cys Gly Trp His Ala Gly Ser Gly
                260                      265                      270
Ala Thr Glu Cys Gly Gly Arg Gly Gly Gln Trp Ser Ala Glu His Pro
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Gly Gly Ile Ala Gly Ala Thr Gly Pro Gly Pro Arg Cys
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<213> Homo sapiens

<400> 5993

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7080
cctagacctt ccctgatgcg attttacctt tgttgaattt gtataaacaa ttgtacaaaa
7140
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7200
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7260
cactgctttc tggaccattt ctaaggcggc ctttacaaga agacattcct gtcggagagg
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7380
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7440
tggaccacac accacatctg ctgccgtctt gacactttt tttgtttggt tggttttgtt
7500
acatcttaca ttatgcagaa ctattttgt acaaattgtt taaaagttat ttatgcaagg
7560
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7680
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7740
gctttgtacc tcaagagtta catgagcatg ttgtggataa atgtaaatta tagtcaaagt
7800
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7858
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<210> 5994
<211> 402
<212> PRT
<213> Homo sapiens

<400> 5994

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Asp Glu Leu Pro Glu Ala Pro Pro Lys Thr Arg Glu Ser Asp His Ser
            20                  25                  30
Arg Ser Ser Ser Pro Thr Ala Gly Pro Ser Thr Glu Gly Ala Glu Gly
        35                  40                  45
Pro Glu Glu Lys Lys Lys Val Lys Met Arg Arg Lys Arg Arg Leu Pro
    50                  55                  60
Asn Lys Glu Leu Ser Arg Glu Leu Ser Lys Glu Leu Asn His Glu Ile
65                  70                  75                  80
Gln Arg Thr Glu Asn Ser Leu Ala Asn Glu Asn Gln Gln Pro Ile Lys
                85                  90                  95
Ser Glu Pro Glu Ser Glu Gly Glu Glu Pro Lys Arg Pro Pro Gly Ile
            100                 105                 110
Cys Glu Arg Pro His Arg Phe Ser Lys Gly Leu Asn Gly Thr Pro Arg
        115                 120                 125
Glu Leu Arg His Gln Leu Gly Pro Ser Leu Arg Ser Pro Pro Arg Val
    130                 135                 140
Ile Ser Arg Pro Pro Pro Ser Val Ser Pro Pro Lys Cys Ile Gln Met
145                 150                 155                 160
Glu Arg His Val Ile Arg Pro Pro Pro Ile Ser Pro Pro Pro Asp Ser
                165                 170                 175
Leu Pro Leu Asp Asp Gly Ala Ala His Val Met His Arg Glu Val Trp
            180                 185                 190
Met Ala Val Phe Ser Tyr Leu Ser His Gln Asp Leu Cys Val Cys Met
        195                 200                 205
Arg Val Cys Arg Thr Trp Asn Arg Trp Cys Cys Asp Lys Arg Leu Trp
    210                 215                 220
Thr Arg Ile Asp Leu Asn His Cys Lys Ser Ile Thr Pro Leu Met Leu
225                 230                 235                 240
Ser Gly Ile Ile Arg Arg Gln Pro Val Ser Leu Asp Leu Ser Trp Thr
                245                 250                 255
Asn Ile Ser Lys Lys Gln Leu Ser Trp Leu Ile Asn Arg Leu Pro Gly
            260                 265                 270
Leu Arg Asp Leu Val Leu Ser Gly Cys Ser Trp Ile Ala Val Ser Ala
    275                 280                 285
Leu Cys Ser Ser Ser Cys Pro Leu Leu Arg Thr Leu Asp Val Gln Trp
```

```
            290                    295                    300
Val Glu Gly Leu Lys Asp Ala Gln Met Arg Asp Leu Leu Ser Pro Pro
305                    310                    315                    320
Thr Asp Asn Arg Pro Gly Glu Leu Pro Gly Trp Gly Phe Leu Trp Gly
                325                    330                    335
Trp Gly Glu Arg Ala Arg Leu Leu Asp Leu Leu Leu Pro Ser Asp Pro
                340                    345                    350
Ser Cys Ser Pro Lys Asp Ile Gly Met Ser Leu Cys Cys His Val Leu
                355                    360                    365
Ser Leu Leu Gln Ala Gln Arg Gly Ser Gly Arg Arg Gln Gly Leu Leu
            370                    375                    380
Cys Thr Arg Glu Thr Arg Ser Trp Gly Ser Ala Cys Val Ser Leu Leu
385                    390                    395                    400
Ser Cys
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<210> 5995
<211> 1528
<212> DNA
<213> Homo sapiens

<400> 5995
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120
ctcagtgatg tgctgccaat gttcagcgtg gacttcagca agcaagtcag cagctcggca
180
gcgtgccata gcaggcagtt tgtacctttg gcgtctggcc aagcacaggt ggttctctcg
240
tggtgggaca ttgaaatgga ccctgagggc aagatcaagt gcaccatggc ccccttctgg
300
gcacactcag acccagagga gatgcagtgg cgggaccact ggnatgcagt gtgtgtactt
360
cctgccacaa gaggagcctg tggtgcaggg ctcagcgctc tatctggtag cccaccacga
420
tgactactgc gtatggtaca gcctgcagag gaccagccct gaaaagaatg agagagtccg
480
ccagatgcgc cccgtgtgtg actgccaggc tcacctgctc tggaaccggc ctcggtttgg
540
agagatcaat gaccaggaca gaactgatcg atacgtccag gctctgagga ccgtgctgaa
600
gccagacagc gtgtgcctgt gtgtcagcga tggcagcctg ctctccgtgc tggcccatca
660
cctgggggtg gagcaggtgt ttacagtcga gagttcagca gcttctcaca aactgttgag
720
aaaaatcttc aaggctaacc acttggaaga taaaattcac atcatagaga aacggccgga
780
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840
cttcactacc agcctgctgc cgtggcgcaa cctctacttc tggtacgtgc ggaccgctgt
900
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960
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ggttgtggag ttcagggacc tgtggcggat ccggagcccc tgtggtgact gcgaaggctt
1020

cgacgtgcac atcatggacg acatgattaa gcgtgccctg gacttcaggg agagcaggga
1080

agctgagccc cacccgctgt gggagtaccc atgccgcagc ctctccgagc cctggcagat
1140

cctgaccttt gacttccagc agccggtgcc cctgcagccc ctgtgtgccg agggcaccgt
1200

ggagctcaga aggcccgggc agagccacgc agcggtgcta tggatggagt accacctgac
1260

cccggagtgc acgctcagca ctggcctcct ggagcctgca gaccccgagg ggggctgctg
1320

ctggaacccc cactgcaagc aggccgtcta cttcttcagc cctgccccag atcccagagc
1380

actgctgggt ggcccacgga ctgtcagcta tgcagtggag tttcaccccg acacaggcga
1440

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1500

ggcctgaggg ctgggaaaaa aaaaaaaa
1528

<210> 5996
<211> 140
<212> PRT
<213> Homo sapiens

<400> 5996
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Glu Arg Cys Pro Gly Ala Pro Ser Val Cys Asp Ile Gln Leu Asn Gln
            20   25   30
Val Ser Pro Ala Asp Phe Thr Val Leu Ser Asp Val Leu Pro Met Phe
        35   40   45
Ser Val Asp Phe Ser Lys Gln Val Ser Ser Ser Ala Ala Cys His Ser
    50   55   60
Arg Gln Phe Val Pro Leu Ala Ser Gly Gln Ala Gln Val Val Leu Ser
65   70   75   80
Trp Trp Asp Ile Glu Met Asp Pro Glu Gly Lys Ile Lys Cys Thr Met
                85   90   95
Ala Pro Phe Trp Ala His Ser Asp Pro Glu Glu Met Gln Trp Arg Asp
            100   105   110
His Trp Xaa Ala Val Cys Val Leu Pro Ala Thr Arg Gly Ala Cys Gly
            115   120   125
Ala Gly Leu Ser Ala Leu Ser Gly Ser Pro Pro Arg
        130   135   140

<210> 5997
<211> 1759
<212> DNA
<213> Homo sapiens

<400> 5997
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120
cagttctaga tggaagaccc agatggcact cctcccgggg aggggttcca gcccccaccc
180
tctcagcccc tccctgcca gctcaactct gcagtacacg atgggggaag gcttaaacgc
240
agctgccagg tgtaattttt caagtgtcaa agatcccaag tgatccctga cacccacccc
300
ttcctactct tacattcatg cgtctgtaag atagctgcct acaacaggtc agtagtgatg
360
ctccgatcag aaaaacaaga tacaaaacaa acaacaaaca cacttggtcc cttcagacca
420
gtaagataca caaaccacct ccacgacctc cgacctcccc cctccctccg gctgctctga
480
ggagcacgtg cctcttcctt caccctgggc cgggctgggg cgggagcagc ccagctgctc
540
tctggatgtc acaccactgt taactgtcag taacaaaaat aataaggtac atgctacaca
600
cacatccagc tggaagcctt gttggcccct aagcctttgt ttcatgctac agtactgagg
660
ggtatgtgtc cccaatgcac agccacccgc acacaactca atgagcttcc tgggaaacac
720
tattccccca cctccacctt aggtggctgc ctcagttttc caaccactgg aatcagtccc
780
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960
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1260
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1320
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1440
cctcccgggt cgccgacccc caggctgagc gcggcggccg atctggggtg ggagttcggg
1500
gcaaggacga gggcgaagag gaggtggacg acgacgagaa gcggtcccaa aggctaggca
1560
tggtgaggac agacgccagg gcgtttgctg atgaactcag agtgccggag cgtagaagcc
1620
gcagtagcgc ggtcagcgag aactgctaag acaagtgcgt cctgccgctt gaatgggtgt
1680
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1740
cccccccctt gccgaattc
1759


<210> 5998
<211> 72
<212> PRT
<213> Homo sapiens


<400> 5998
Thr Ala Pro Gly Ser Trp Ala Arg Val Val Ser Pro Gly Ala Ala Arg
 1               5                  10                  15
Gly Ser Ala Gly Arg Trp Ala Pro Gly Trp Gly Arg Val Pro Ala Gly
             20                  25                  30
Pro Arg Cys Gly Ser Ser Cys Pro Ala Pro Arg Arg Arg Pro Ala Ala
         35                  40                  45
Pro Pro Ala Gly Arg Thr Ala Arg Cys Arg Pro Gly Ala Val Val Leu
     50                  55                  60
Cys Pro Pro Gly Leu Pro Thr Gly
65                  70


<210> 5999
<211> 2759
<212> DNA
<213> Homo sapiens


<400> 5999
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120
cgggaggccg ttgcgacagc agtgcaaagg gttgctggga tgctccagcg cccggaccag
180
ctggacaagg tggagcagta tcgcaggaga gaagcgcgga agaaggcctc cgtggaggcc
240
agattgaagg ccgccatcca gtcacagttg gacggggtgc gcacaggcct cagccagctc
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cacaacgccc tgaatgacgt caaagacatc cagcagtcgc tggcagacgt cagcaaggac
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420
cacagccagc tcgccgcagc cgtggagaac ctcaagaaca tcttctcagt gcctgagatt
480
gtgagggaga cccaggacct aattgaacaa ggggcactcc tgcaagccca ccggaagctg
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720
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780
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900
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960
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1020
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2160
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2280
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2400
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5175

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2460

ttaggtgcca gtgtgatgca ccgggtgtgc gtcgagtgag cgtcccgagg ccacgtgcgg
2520

aggcccctca ctgtgctgtc aaaggcctgt gggtgcaggg ctctgccgca cagcctctct
2580

tgggtgcttg tttgttgcag tggttgaaag tgtgtggggc acagaggacg tgcacctccc
2640

tgccctcctc ctccctgggc cttcaccgca ccccatctgc ttaagtgctc ggaaccccgt
2700

cacctaatta aagtttctcg gcttcctcag agaaaaaaaa aaaaaaaaaa aaaaaaaaa
2759

<210> 6000
<211> 757
<212> PRT
<213> Homo sapiens

<400> 6000
His Glu Gln Cys Glu Asp Ser Thr Ser Phe Phe Thr Met Lys Glu Thr
1   5   10   15
Asp Arg Glu Ala Val Ala Thr Ala Val Gln Arg Val Ala Gly Met Leu
            20   25   30
Gln Arg Pro Asp Gln Leu Asp Lys Val Glu Gln Tyr Arg Arg Arg Glu
        35   40   45
Ala Arg Lys Lys Ala Ser Val Glu Ala Arg Leu Lys Ala Ala Ile Gln
    50   55   60
Ser Gln Leu Asp Gly Val Arg Thr Gly Leu Ser Gln Leu His Asn Ala
65   70   75   80
Leu Asn Asp Val Lys Asp Ile Gln Gln Ser Leu Ala Asp Val Ser Lys
                85   90   95
Asp Trp Arg Gln Ser Ile Asn Thr Ile Glu Ser Leu Lys Asp Val Lys
            100   105   110
Asp Ala Val Val Gln His Ser Gln Leu Ala Ala Ala Val Glu Asn Leu
            115   120   125
Lys Asn Ile Phe Ser Val Pro Glu Ile Val Arg Glu Thr Gln Asp Leu
    130   135   140
Ile Glu Gln Gly Ala Leu Leu Gln Ala His Arg Lys Leu Met Asp Leu
145   150   155   160
Glu Cys Ser Arg Asp Gly Leu Met Tyr Glu Gln Tyr Arg Met Asp Ser
            165   170   175
Gly Asn Thr Arg Asp Met Thr Leu Ile His Gly Tyr Phe Gly Ser Thr
            180   185   190
Gln Gly Leu Ser Asp Glu Leu Ala Lys Gln Leu Trp Met Val Leu Gln
        195   200   205
Arg Ser Leu Val Thr Val Arg Arg Asp Pro Thr Leu Leu Val Ser Val
    210   215   220
Val Arg Ile Ile Glu Arg Glu Glu Lys Ile Asp Arg Arg Ile Leu Asp
225   230   235   240
Arg Lys Lys Gln Thr Gly Phe Val Pro Pro Gly Arg Pro Lys Asn Trp
                245   250   255
Lys Glu Lys Met Phe Thr Ile Leu Glu Arg Thr Val Thr Thr Arg Ile
            260   265   270
Glu Gly Thr Gln Ala Asp Thr Arg Glu Ser Asp Lys Met Trp Leu Val

```
                275                  280                  285
Arg His Leu Glu Ile Ile Arg Lys Tyr Val Leu Asp Asp Leu Ile Val
    290                  295                  300
Ala Lys Asn Leu Met Val Gln Cys Phe Pro Pro His Tyr Glu Ile Phe
305                  310                  315                  320
Lys Asn Leu Leu Asn Met Tyr His Gln Ala Leu Ser Thr Arg Met Gln
                325                  330                  335
Asp Leu Ala Ser Glu Asp Leu Glu Ala Asn Glu Ile Val Ser Leu Leu
                340                  345                  350
Thr Trp Val Leu Asn Thr Tyr Thr Ser Thr Glu Met Met Arg Asn Val
                355                  360                  365
Glu Leu Ala Pro Glu Val Asp Val Gly Thr Leu Glu Pro Leu Leu Ser
    370                  375                  380
Pro His Val Val Ser Glu Leu Leu Asp Thr Tyr Met Ser Thr Leu Thr
385                  390                  395                  400
Ser Asn Ile Ile Ala Trp Leu Arg Lys Ala Leu Glu Thr Asp Lys Lys
                405                  410                  415
Asp Trp Val Lys Glu Thr Glu Pro Glu Ala Asp Gln Asp Gly Tyr Tyr
                420                  425                  430
Gln Thr Thr Leu Pro Ala Ile Val Phe Gln Met Phe Glu Gln Asn Leu
                435                  440                  445
Gln Val Ala Ala Gln Ile Ser Glu Asp Leu Lys Thr Lys Val Leu Val
    450                  455                  460
Leu Cys Leu Gln Gln Met Asn Ser Phe Leu Ser Arg Tyr Lys Asp Glu
465                  470                  475                  480
Ala Gln Leu Tyr Lys Glu Glu His Leu Arg Asn Arg Gln His Pro His
                485                  490                  495
Cys Tyr Val Gln Tyr Met Ile Ala Ile Ile Asn Asn Cys Gln Thr Phe
                500                  505                  510
Lys Glu Ser Ile Val Ser Leu Lys Arg Lys Tyr Leu Lys Asn Glu Val
                515                  520                  525
Glu Glu Gly Val Ser Pro Ser Gln Pro Ser Met Asp Gly Ile Leu Asp
    530                  535                  540
Ala Ile Ala Lys Glu Gly Cys Ser Gly Leu Leu Glu Glu Val Phe Leu
545                  550                  555                  560
Asp Leu Glu Gln His Leu Asn Glu Leu Met Thr Lys Lys Trp Leu Leu
                565                  570                  575
Gly Ser Asn Ala Val Asp Ile Ile Cys Val Thr Val Glu Asp Tyr Phe
                580                  585                  590
Asn Asp Phe Ala Lys Ile Lys Lys Pro Tyr Lys Lys Arg Met Thr Ala
                595                  600                  605
Glu Ala His Arg Arg Val Val Val Glu Tyr Leu Arg Ala Val Met Gln
    610                  615                  620
Lys Arg Ile Ser Phe Arg Ser Pro Glu Glu Arg Lys Glu Gly Ala Glu
625                  630                  635                  640
Lys Met Val Arg Glu Ala Glu Gln Arg Arg Phe Leu Phe Arg Lys Leu
                645                  650                  655
Ala Ser Gly Phe Gly Glu Asp Val Asp Gly Tyr Cys Asp Thr Ile Val
                660                  665                  670
Ala Val Ala Glu Val Ile Lys Leu Thr Asp Pro Ser Leu Leu Tyr Leu
    675                  680                  685
Glu Val Ser Thr Leu Val Ser Lys Tyr Pro Asp Ile Arg Asp Asp His
    690                  695                  700
Ile Gly Ala Leu Leu Ala Val Arg Gly Asp Ala Ser Arg Asp Met Lys
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5177

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         705                  710                  715                  720
         Gln Thr Ile Met Glu Thr Leu Glu Gln Gly Pro Ala Gln Ala Ser Pro
                         725                  730                  735
         Ser Tyr Val Pro Leu Phe Lys Asp Ile Val Val Pro Ser Leu Asn Val
                         740                  745                  750
         Ala Lys Leu Leu Lys
                         755
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<210> 6001
<211> 2490
<212> DNA
<213> Homo sapiens

<400> 6001
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120
gactgggagg cagagccgcc gccaaggggg cctcggttaa acactggtcg ttcaatcacc
180
tgcaagacga aggaggcaag gatgctgttg gcctgggtac aagcattcct cgtcagcaac
240
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300
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480
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660
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720
ggcattacca tgatggtgat catcattgcc atcggagctg gcatcatctt gggctactcc
780
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840
cagcgaatca ctctgccctt gtctgccttc accaaccccc cctgtgagat tgtggatgag
900
aagactgtcg tggtccacac cagccagaⅽⅽ ccagttgacc ctcaggaggg caccacccccc
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cttatgggcc aggccgggac tcctggggcc tgagcccccc cagtgggcag gagcccatgc
1020
agacactggt gcaggacagc ccaccctcct acagctagga ggaactacca ctttgtgttc
1080
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1140
aggtggccct gtgggctgag ggtaaggctg ggtagggtcc taacagtgct ccttgtccat
1200
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1260
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1560
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2040
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2160
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2340
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2490


<210> 6002
<211> 263
<212> PRT
<213> Homo sapiens

<400> 6002
Met Leu Leu Ala Trp Val Gln Ala Phe Leu Val Ser Asn Met Leu Leu
1               5                   10                  15
Ala Glu Ala Tyr Gly Ser Gly Gly Cys Phe Trp Asp Asn Gly His Leu
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```
                20                    25                    30
Tyr Arg Glu Asp Gln Thr Ser Pro Ala Pro Gly Leu Arg Cys Leu Asn
            35                    40                    45
Trp Leu Asp Ala Gln Ser Gly Leu Ala Ser Ala Pro Val Ser Gly Ala
        50                    55                    60
Gly Asn His Ser Tyr Cys Arg Asn Pro Asp Glu Asp Pro Ala Gly Pro
65                      70                    75                    80
Trp Cys Tyr Val Ser Gly Glu Ala Gly Val Pro Glu Lys Arg Pro Cys
                85                    90                    95
Glu Asp Leu Arg Cys Pro Glu Thr Thr Ser Gln Ala Leu Pro Ala Phe
            100                   105                   110
Thr Thr Glu Ile Gln Glu Ala Ser Glu Gly Pro Gly Ala Asp Glu Val
            115                   120                   125
Gln Val Phe Ala Pro Ala Asn Ala Leu Pro Ala Arg Ser Glu Ala Ala
        130                   135                   140
Ala Val Gln Pro Val Ile Gly Ile Ser Gln Arg Val Arg Met Asn Ser
145                   150                   155                   160
Lys Glu Lys Lys Asp Leu Gly Thr Leu Gly Tyr Val Leu Gly Ile Thr
                165                   170                   175
Met Met Val Ile Ile Ile Ala Ile Gly Ala Gly Ile Ile Leu Gly Tyr
                180                   185                   190
Ser Tyr Lys Arg Gly Lys Asp Leu Lys Glu Gln His Asp Gln Lys Val
            195                   200                   205
Cys Glu Arg Glu Met Gln Arg Ile Thr Leu Pro Leu Ser Ala Phe Thr
    210                   215                   220
Asn Pro Thr Cys Glu Ile Val Asp Glu Lys Thr Val Val Val His Thr
225                   230                   235                   240
Ser Gln Thr Pro Val Asp Pro Gln Glu Gly Thr Thr Pro Leu Met Gly
                245                   250                   255
Gln Ala Gly Thr Pro Gly Ala
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<210> 6003
<211> 3107
<212> DNA
<213> Homo sapiens

<400> 6003

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180
ctctgtctgg cttctcacga acagctgtct ggagagcttc acgtgctgga gagctgttgc
240
tccgtcatcg ctcacagagg catgggcccg aatttcagcc ccctctgcct ctccgtccag
300
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360
acgcagccag cgtgaaatcc tcaggttggt tctcttcaga tgtgggaggt daccgcagcc
420
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480
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ctcgaagtac ccagggctct ccccagcgct gcccgccccc agccttctga acacctgcca
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600
tcccgatttc caggtgcatg tcgaaaagcg tgcagtggcc ttgtgacgtg gccgggccct
660
tggcaaggaa gtcctggcgg gtatcagcct ctgcactgca ccctgggtgg actgagtcgg
720
ggccaggatt gtgtcagggg aggtggagga gacgcgggga cagccggttc acagcggcct
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1260
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1320
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1440
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1740
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1920
cctgcagagg ccccagcccc cttgtcctct gcattccagc cacctgccct gggcccagct
1980
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2040
gacactggga ggggacagct ccacctcctc tccccggaca ccccaaaagg cggagacgtt
2100

cacaagctgt cctgtcggcg gctgctgttt gtggaggagt aaagcatcct agcgagactg
2160

caggctcggt gtacatctga tttactgaat tttaaagtct gggatgttag tggggaagag
2220

gcgaggtgag cattgcgtga cgccgaggac taggcggggc ggggactgca cctggctagg
2280

caccccacc ctgggcaact tgcccacgga ccccagggca gtgagtagtg acaggaggta
2340

gcccggggtg agacctctca cagcaagaag atggtgtggt tgctggggcc tccctggaga
2400

gtgtcgtccc tgcggcccct gggaagtgct ccctcacgac ggaaggtttc ctgtcagtgc
2460

ggtcccgggg cctgatagtg gcggtgggcg ggtggggtca cgtgtcctca aggtcctgaa
2520

tgcccagctc tgccccattc ctctgattcc cagtggctgc tagctggacc cagctggtgt
2580

cctgggcatg aaggcagggc caccgtcccc agcaggtgct gccctcctgg ccagctgagc
2640

atcctggcca ccatcagcgt ccaggtgccc ctactcgccc ttcctcttct tcagaagcct
2700

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2760

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2820

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2880

acggacccac acgacgcccg gctctgggcg gggatggggc cggggctgct gcggggtccc
2940

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3000

acctcctgtc actactcagt gccgtggggt ccgtgggcaa gttgcccagg gtggggtgc
3060

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3107

<210> 6004
<211> 140
<212> PRT
<213> Homo sapiens

<400> 6004
Met Val Thr Thr Pro Ser Trp Trp Ala Val Trp Pro Trp Val Ser Gly
1   5   10   15
Gly Ala Thr Gly Cys Thr Glu Leu Gly Ser Trp Glu Thr Val Pro Arg
            20   25   30
Pro Ala Val Pro Lys Val Ala Pro Gly Thr Met Pro Thr Arg Pro Glu
            35   40   45
Gly Gly Thr Glu Thr Thr Ser Met Leu Xaa Val Pro Gly Val Thr Gln
        50   55   60
Ser Pro Arg Gly Glu Arg Gly Ser Gly Pro His Ala Val Gln Gly Val
65   70   75   80
Ala Leu Pro Xaa Arg Gly Ser Pro Arg Gly Pro Gly Pro Arg Ala Pro
                85   90   95
Gly Arg Gly Arg Asp Cys Gly Gly Asn Gly Pro Ala Glu Ala Pro Ala

```
                    100                   105                   110
         Pro Leu Ser Ser Ala Phe Gln Pro Pro Ala Leu Gly Pro Ala Pro Lys
                 115                   120                   125
         Glu Gly Gly Pro Ser Ser Leu Asn Lys Arg Cys Thr
             130                   135                   140
```

<210> 6005
<211> 1735
<212> DNA
<213> Homo sapiens

<400> 6005

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120
tccggcctcc cgggcgctga cggcctcaag ggggagaagg gggagtcggc atctcagcct
180
acaggagagc ctggctcagc tcatagtgag ccagggcccc ctggcccccc tggcccccca
240
ggcccgatgg gcctccaggg aatccagggt cccaagggct tggatggagc aaagggagag
300
aagggtgcgt cgggtgagag aggctccagc ggcctgcctg gccagttgg cccaccgggc
360
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420
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480
cgaggggtcc ccggccggaa aggagtgaag ggccagaagg gcgagccggg accaccaggc
540
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600
tgacccacag gcccagctca cacctgtaca gatccgtgtg gacatttta attttgtaa
660
aaacaaaaca gtaatatatt gatctttttt catggaatgc gctacctgtg gccttttaac
720
attcaagagt atgcccaccc agccccaaag ccaccggcat gtgaagctgc cggaaagtgg
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840
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900
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960
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1020
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1080
gcagttggac aagacttggc ccccggacaa gactcgccca gcacttgcgg ctgggcccgg
1140
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1200
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1260
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atcgctgtga tgtggaccca gctccaggga gcagagtgtc ggggatggag gggcccagcc
1320
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1620
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1680
gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaag
1735
```

<210> 6006
<211> 200
<212> PRT
<213> Homo sapiens

<400> 6006
```
Glu Leu Gly Leu Pro Gly Ala Pro Gly Ile Asp Gly Glu Lys Gly Pro
1               5                   10                  15
Lys Gly Gln Lys Gly Asp Pro Gly Glu Pro Gly Pro Ala Gly Leu Lys
            20                  25                  30
Gly Glu Ala Gly Glu Met Gly Leu Ser Gly Leu Pro Gly Ala Asp Gly
        35                  40                  45
Leu Lys Gly Glu Lys Gly Glu Ser Ala Ser Gln Pro Thr Gly Glu Pro
    50                  55                  60
Gly Ser Ala His Ser Glu Pro Gly Pro Pro Gly Pro Gly Pro Pro
65                  70                  75                  80
Gly Pro Met Gly Leu Gln Gly Ile Gln Gly Pro Lys Gly Leu Asp Gly
                85                  90                  95
Ala Lys Gly Glu Lys Gly Ala Ser Gly Glu Arg Gly Ser Ser Gly Leu
            100                 105                 110
Pro Gly Pro Val Gly Pro Pro Gly Leu Ile Gly Leu Pro Gly Thr Lys
        115                 120                 125
Gly Glu Lys Gly Arg Pro Gly Glu Pro Gly Leu Asp Gly Phe Pro Gly
    130                 135                 140
Pro Arg Gly Glu Lys Gly Asp Arg Ser Glu Arg Gly Glu Lys Gly Glu
145                 150                 155                 160
Arg Gly Val Pro Gly Arg Lys Gly Val Lys Gly Gln Lys Gly Glu Pro
                165                 170                 175
Gly Pro Pro Gly Leu Asp Gln Pro Cys Pro Val Gly Pro Asp Gly Leu
            180                 185                 190
Pro Val Pro Gly Cys Trp His Lys
        195                 200
```

<210> 6007
<211> 693
<212> DNA
<213> Homo sapiens

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<400> 6007
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gccatttcag taccaagcct ttctgctcca ggtcaaggga agatggtgaa aaaagtctgt
120
ccttgcaacc agctctgtag aaccagcagc acaaacactg ttggggcaac agtgaacagc
180
caagccgccc aagctcagcc tcctgccatg acgtccagca ggaagggcac attcacagat
240
gacttgcaca agttggtaga caattgggcc cgagatgcca tgaatctctc aggcaggaga
300
ggaagcaaag ggcacatgaa ttatgagggc cctggaatgg caaggaagtt ctctgcacct
360
gggcaactgt gcatctccat gacctcgaac ctgggtggct ctgcccccat tctgcagca
420
tcagctacct ctctaggtca cttcaccaag tctatgtgcc ccccacagca gtatggcttt
480
ccagctaccc catttggcgc tcaatggagt gggacgggtg cccagcacc acagccactt
540
ggccagttcc aacctgtggg aactgcctcc ttgcagaatt caacatcag caatttgcag
600
aaatccatca gcaacccccc aggctccaac ctgcggacca cttagaccta gagacattaa
660
ctgaatagat ctgggggcag gagatggaat gct
693


<210> 6008
<211> 214
<212> PRT
<213> Homo sapiens

<400> 6008
Gln Pro Leu Lys Pro Ser Pro Ser Ser Asp Asn Leu Tyr Ser Ala Phe
 1               5                  10                  15
Thr Ser Asp Gly Ala Ile Ser Val Pro Ser Leu Ser Ala Pro Gly Gln
             20                  25                  30
Gly Lys Met Val Lys Lys Val Cys Pro Cys Asn Gln Leu Cys Arg Thr
         35                  40                  45
Ser Ser Thr Asn Thr Val Gly Ala Thr Val Asn Ser Gln Ala Ala Gln
     50                  55                  60
Ala Gln Pro Pro Ala Met Thr Ser Ser Arg Lys Gly Thr Phe Thr Asp
65                  70                  75                  80
Asp Leu His Lys Leu Val Asp Asn Trp Ala Arg Asp Ala Met Asn Leu
                 85                  90                  95
Ser Gly Arg Arg Gly Ser Lys Gly His Met Asn Tyr Glu Gly Pro Gly
                100                 105                 110
Met Ala Arg Lys Phe Ser Ala Pro Gly Gln Leu Cys Ile Ser Met Thr
             115                 120                 125
Ser Asn Leu Gly Gly Ser Ala Pro Ile Ser Ala Ala Ser Ala Thr Ser
         130                 135                 140
Leu Gly His Phe Thr Lys Ser Met Cys Pro Pro Gln Gln Tyr Gly Phe
145                 150                 155                 160
Pro Ala Thr Pro Phe Gly Ala Gln Trp Ser Gly Thr Gly Gly Pro Ala
```

```
                   165                  170                  175
      Pro Gln Pro Leu Gly Gln Phe Gln Pro Val Gly Thr Ala Ser Leu Gln
                   180                  185                  190
      Asn Phe Asn Ile Ser Asn Leu Gln Lys Ser Ile Ser Asn Pro Pro Gly
                   195                  200                  205
      Ser Asn Leu Arg Thr Thr
          210
```

```
<210> 6009
<211> 1570
<212> DNA
<213> Homo sapiens

<400> 6009
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agcggcccgc tggctgtcct ggcgcaggtg gtccggcgct caacagacac cgtgtatgac
120
gtggtggtgt cgggtggagg cctggtgggc gctgccatgg cctgtgcctt gggatatgat
180
attcactttc atgacaagaa aatcctgttg ctcgaagcag gtccaaagaa agtactggag
240
aaattgtcag aaacttacag caacagggtc agctccattt ccctggctc tgcaacgctt
300
ctcagtagtt ttggtgcctg ggaccatatc tgcaacatga gatacagagc ctttcggcga
360
atgcaggtgt gggacgcctg ctcagaggcc ctgataatgt ttgataagga taatttagat
420
gacatgggct atatcgtgga gaatgatgtc atcatgcatg ctctcactaa gcagttggag
480
gctgtgtctg accgagtgac ggttctctac aggagcaaag ccattcgcta tacctggcct
540
tgtccatttc ctatggccga ctccagccct tgggttcata ttaccctagg tgatggcagc
600
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660
gttggaatcc agaatgtgag ctggaactat gaccagtctg ctgttgtggc tactctgcat
720
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1200
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1320
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1380
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1440
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1560
aaaaaaaaaa
1570

<210> 6010
<211> 468
<212> PRT
<213> Homo sapiens

<400> 6010
Met Ala Ala Arg Leu Val Ser Arg Cys Gly Ala Val Arg Ala Ala Pro
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His Ser Gly Pro Leu Ala Val Leu Ala Gln Val Val Arg Arg Ser Thr
            20   25   30
Asp Thr Val Tyr Asp Val Val Val Ser Gly Gly Gly Leu Val Gly Ala
            35   40   45
Ala Met Ala Cys Ala Leu Gly Tyr Asp Ile His Phe His Asp Lys Lys
        50   55   60
Ile Leu Leu Leu Glu Ala Gly Pro Lys Lys Val Leu Glu Lys Leu Ser
65   70   75   80
Glu Thr Tyr Ser Asn Arg Val Ser Ser Ile Ser Pro Gly Ser Ala Thr
                85   90   95
Leu Leu Ser Ser Phe Gly Ala Trp Asp His Ile Cys Asn Met Arg Tyr
            100   105   110
Arg Ala Phe Arg Arg Met Gln Val Trp Asp Ala Cys Ser Glu Ala Leu
        115   120   125
Ile Met Phe Asp Lys Asp Asn Leu Asp Asp Met Gly Tyr Ile Val Glu
    130   135   140
Asn Asp Val Ile Met His Ala Leu Thr Lys Gln Leu Glu Ala Val Ser
145   150   155   160
Asp Arg Val Thr Val Leu Tyr Arg Ser Lys Ala Ile Arg Tyr Thr Trp
                165   170   175
Pro Cys Pro Phe Pro Met Ala Asp Ser Ser Pro Trp Val His Ile Thr
                180   185   190
Leu Gly Asp Gly Ser Thr Phe Gln Thr Lys Leu Leu Ile Gly Ala Asp
            195   200   205
Gly His Asn Ser Gly Val Arg Gln Ala Val Gly Ile Gln Asn Val Ser
        210   215   220
Trp Asn Tyr Asp Gln Ser Ala Val Val Ala Thr Leu His Leu Ser Glu
225   230   235   240
Ala Thr Glu Asn Asn Val Ala Trp Gln Arg Phe Leu Pro Ser Gly Pro
                245   250   255
Ile Ala Leu Leu Pro Leu Ser Asp Thr Leu Ser Ser Leu Val Trp Ser

```
              260                 265                  270
Thr Ser His Glu His Ala Ala Glu Leu Val Ser Met Asp Glu Glu Lys
          275                 280                 285
Phe Val Asp Ala Val Asn Ser Ala Phe Trp Ser Asp Ala Asp His Thr
          290                 295                 300
Asp Phe Ile Asp Thr Ala Gly Ala Met Leu Gln Tyr Pro Val Ser Leu
305                 310                 315                 320
Leu Lys Pro Thr Lys Val Ser Ala Arg Gln Leu Pro Pro Ser Val Pro
              325                 330                 335
Trp Val Asp Ala Lys Ser Arg Val Leu Phe Pro Leu Gly Leu Gly His
          340                 345                 350
Ala Ala Glu Tyr Val Arg Pro Arg Val Ala Leu Ile Gly Asp Ala Ala
          355                 360                 365
His Arg Val His Pro Leu Ala Gly Gln Gly Val Asn Met Gly Phe Gly
      370                 375                 380
Asp Ile Ser Ser Leu Ala His His Leu Ser Thr Ala Ala Phe Asn Gly
385                 390                 395                 400
Lys Asp Leu Gly Ser Val Ser His Leu Thr Gly Tyr Glu Thr Glu Arg
              405                 410                 415
Gln Arg His Asn Thr Ala Leu Leu Ala Ala Thr Asp Leu Leu Lys Arg
          420                 425                 430
Leu Tyr Ser Thr Ser Ala Ser Pro Leu Val Leu Leu Arg Thr Trp Gly
          435                 440                 445
Leu Gln Ala Thr Asn Ala Val Ser Pro Leu Lys Glu Gln Ile Met Ala
      450                 455                 460
Phe Ala Ser Lys
465
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<210> 6011
<211> 1331
<212> DNA
<213> Homo sapiens

<400> 6011

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120
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180
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420
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540
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600
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1331
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<210> 6012
<211> 219
<212> PRT
<213> Homo sapiens
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<400> 6012
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Val Phe Ser Lys Gly Val Arg Glu Val Glu Arg Val Leu Gln Leu Pro
            20                  25                  30
Lys Glu Pro Gly Asp Ser Ala Gln Phe Thr Lys Ala Ile Ala Ile Ile
            35                  40                  45
Phe Pro Phe Leu Tyr Leu Leu Glu Lys Val Glu Cys Thr Pro Ser Gln
        50                  55                  60
Glu His Leu Lys His Gln Thr Val Tyr Arg Leu Leu Lys Cys Ala Pro
65                  70                  75                  80
Arg Gly Lys Asn Gly Phe Thr Pro Leu His Met Ala Val Asp Lys Asp
                85                  90                  95
Thr Thr Asn Val Gly Arg Tyr Pro Val Gly Arg Phe Pro Ser Leu His
                100                 105                 110
Val Val Lys Val Leu Leu Asp Cys Gly Ala Asp Pro Asp Ser Arg Asp
            115                 120                 125
Phe Asp Asn Asn Thr Pro Leu His Ile Ala Ala Gln Asn Asn Cys Pro
        130                 135                 140
Ala Ile Met Asn Ala Leu Ile Glu Ala Gly Ala His Met Asp Ala Thr
145                 150                 155                 160
Asn Ala Phe Lys Lys Thr Ala Tyr Glu Leu Leu Asp Glu Lys Leu Leu
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```
                     165                   170                   175
      Ala Arg Gly Thr Met Gln Pro Phe Asn Tyr Val Thr Leu Gln Cys Leu
                   180                   185                   190
      Ala Ala Arg Ala Leu Asp Lys Asn Lys Ile Pro Tyr Lys Gly Phe Ile
               195                   200                   205
      Pro Glu Asp Leu Glu Ala Phe Ile Glu Leu His
           210                   215
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<210> 6013
<211> 2204
<212> DNA
<213> Homo sapiens

<400> 6013

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420
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1200
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1320
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1380
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1440
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1920
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2100
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2160
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2204
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<210> 6014
<211> 182
<212> PRT
<213> Homo sapiens
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<400> 6014
Arg Gln His Asn Lys Asp Lys Pro Phe Lys Cys His Asn Cys His Arg
1               5                   10                  15
Ala Tyr Thr Asp Ala Ala Ser Leu Glu Val His Leu Ser Thr His Thr
            20                  25                  30
Val Lys His Ala Lys Val Tyr Thr Cys Thr Ile Cys Ser Arg Ala Tyr
        35                  40                  45
Thr Ser Glu Thr Tyr Leu Met Lys His Met Arg Lys His Asn Pro Pro
    50                  55                  60
Asp Leu Gln Gln Gln Val Gln Ala Ala Ala Ala Ala Ala Val Ala
65                  70                  75                  80
Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala
                85                  90                  95
Gln Ala Gln Ala Gln Ala Ser Gln Ala Ser Gln Gln Gln Gln Gln Gln
```

```
           100                    105                    110
Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro His Phe Gln Ser
       115                    120                    125
Pro Gly Ala Ala Pro Gln Gly Gly Gly Gly Asp Ser Asn Pro Asn
   130                    135                    140
Pro Pro Pro Gln Cys Ser Phe Asp Leu Thr Pro Tyr Lys Thr Ala Glu
145                    150                    155                    160
His His Lys Asp Ile Cys Leu Thr Val Thr Thr Ser Thr Ile Gln Val
                   165                    170                    175
Glu His Leu Ala Ser Ser
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<210> 6015
<211> 612
<212> DNA
<213> Homo sapiens

<400> 6015
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120
tgagaatcct gattgaatgg aagtgaagag ccatgagaag ctcgcccagg agagtctaat
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240
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420
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480
gccagtgaga gaacagtcac acgataaagg cacagcacag cagttggttg tctctttta
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acctggcatg gc
612

<210> 6016
<211> 99
<212> PRT
<213> Homo sapiens

<400> 6016
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Met Glu Arg Gly Lys Lys Ala Cys Arg Leu Arg Arg Arg Ala His Arg
1   5   10   15
Pro Arg Ser Pro Glu Arg Leu Pro Ala Ser Gln Gly Ile Ser Arg Gly
               20   25   30
Arg Cys Lys Leu Asn Asn Asn Ser Trp Ser Gly Leu Thr Cys Pro Thr
           35   40   45
Leu Ser Met Ser Cys Asn Gln Asn Lys Leu Asp Ser Pro Gly Arg Ala
```

```
         50                    55                    60
Ser His Gly Ser Ser Leu Pro Phe Asn Gln Asp Ser Gln Lys Pro Ala
65                    70                    75                    80
Phe Tyr Asn Ile Phe Leu Lys Lys Ser His Ser Phe Gln Ser Leu Leu
                        85                    90                    95
Gln Tyr Ile
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<210> 6017
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6017

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120
tggaatttca gagaactgag tgaaaacagc cagcaggcag ccaacgtcct ctcgggagcc
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1200
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1260

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1320

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1380

cgaggagagg tggtgaaggc atttgtggtc ctggcctcgc agttcctgtc ccatgaccca
1440

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ccaagaaaga tagagtttgt cttgaacctg cccaagactg tcacagggaa aattcaacga
1560

gccaagcttc gagacaagga gtggaagatg tccggaaaag cccgtgcgca gtgagacatc
1620

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1680

ccttactatg atgatatgag attctttatg aaagaacatg aatgtaagtt ttgtcttgcc
1740

ctggttatta gccttggtta ttagcacaaa actttaccat gttagatgtt gaaagaagaa
1800

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1860

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1920

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1980

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2040

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<210> 6018
<211> 537
<212> PRT
<213> Homo sapiens

<400> 6018
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Met Glu Lys Ala Gly Lys Arg Leu Pro Ser Pro Ala Leu Trp Trp Val
            20   25   30
Asn Gly Lys Gly Lys Glu Leu Met Trp Asn Phe Arg Glu Leu Ser Glu
        35   40   45
Asn Ser Gln Gln Ala Ala Asn Val Leu Ser Gly Ala Cys Gly Leu Gln
    50   55   60
Arg Gly Asp Arg Val Ala Val Met Leu Pro Arg Val Pro Glu Trp Trp
65   70   75   80
Leu Val Ile Leu Gly Cys Ile Arg Ala Gly Leu Ile Phe Met Pro Gly
                85   90   95
Thr Ile Gln Met Lys Ser Thr Asp Ile Leu Tyr Arg Leu Gln Met Ser
                100   105   110
Lys Ala Lys Ala Ile Val Ala Gly Asp Glu Val Ile Gln Glu Val Asp
            115   120   125
Thr Val Ala Ser Glu Cys Pro Ser Leu Arg Ile Lys Leu Leu Val Ser

```
        130                    135                    140
Glu Lys Ser Cys Asp Gly Trp Leu Asn Phe Lys Lys Leu Leu Asn Glu
145                    150                    155                    160
Ala Ser Thr Thr His His Cys Val Glu Thr Gly Ser Gln Glu Ala Ser
                165                    170                    175
Ala Ile Tyr Phe Thr Ser Gly Thr Ser Gly Leu Pro Lys Met Ala Glu
            180                    185                    190
His Ser Tyr Ser Ser Leu Gly Leu Lys Ala Lys Met Asp Ala Gly Trp
            195                    200                    205
Thr Gly Leu Gln Ala Ser Asp Ile Met Trp Thr Ile Ser Asp Thr Gly
    210                    215                    220
Trp Ile Leu Asn Ile Leu Gly Ser Leu Leu Glu Ser Trp Thr Leu Gly
225                    230                    235                    240
Ala Cys Thr Phe Val His Leu Leu Pro Lys Phe Asp Pro Leu Val Ile
                245                    250                    255
Leu Lys Thr Leu Ser Ser Tyr Pro Ile Lys Ser Met Met Gly Ala Pro
            260                    265                    270
Ile Val Tyr Arg Met Leu Leu Gln Gln Asp Leu Ser Ser Tyr Lys Phe
            275                    280                    285
Pro His Leu Gln Asn Cys Leu Ala Gly Gly Glu Ser Leu Leu Pro Glu
    290                    295                    300
Thr Leu Glu Asn Trp Arg Ala Gln Thr Gly Leu Asp Ile Arg Glu Phe
305                    310                    315                    320
Tyr Gly Gln Thr Glu Thr Gly Leu Thr Cys Met Val Ser Lys Thr Met
                325                    330                    335
Lys Ile Lys Pro Gly Tyr Met Gly Thr Ala Ala Ser Cys Tyr Asp Val
            340                    345                    350
Gln Val Ile Asp Asp Lys Gly Asn Val Leu Pro Pro Gly Thr Glu Gly
            355                    360                    365
Asp Ile Gly Ile Arg Val Lys Pro Ile Arg Pro Ile Gly Ile Phe Ser
    370                    375                    380
Gly Tyr Val Glu Asn Pro Asp Lys Thr Ala Ala Asn Ile Arg Gly Asp
385                    390                    395                    400
Phe Trp Leu Leu Gly Asp Arg Gly Ile Lys Asp Glu Asp Gly Tyr Phe
                405                    410                    415
Gln Phe Met Gly Arg Ala Asp Asp Ile Ile Asn Ser Ser Gly Tyr Arg
            420                    425                    430
Ile Gly Pro Ser Glu Val Glu Asn Ala Leu Met Lys His Pro Ala Val
            435                    440                    445
Val Glu Thr Ala Val Ile Ser Ser Pro Asp Pro Val Arg Gly Glu Val
    450                    455                    460
Val Lys Ala Phe Val Val Leu Ala Ser Gln Phe Leu Ser His Asp Pro
465                    470                    475                    480
Glu Gln Leu Thr Lys Glu Leu Gln Gln His Val Lys Ser Val Thr Ala
                485                    490                    495
Pro Tyr Lys Tyr Pro Arg Lys Ile Glu Phe Val Leu Asn Leu Pro Lys
            500                    505                    510
Thr Val Thr Gly Lys Ile Gln Arg Ala Lys Leu Arg Asp Lys Glu Trp
            515                    520                    525
Lys Met Ser Gly Lys Ala Arg Ala Gln
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<210> 6019
<211> 3002

5195

<212> DNA
<213> Homo sapiens

<400> 6019
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1500

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3002
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<210> 6020

5197

<211> 387
<212> PRT
<213> Homo sapiens

<400> 6020

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Met Ala Ala Ile Pro Ala Leu Asp Pro Glu Ala Glu Pro Ser Met Asp
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Val Ile Leu Val Gly Ser Ser Glu Leu Ser Ser Ser Val Ser Pro Gly
                20                  25                  30
Thr Gly Arg Asp Leu Ile Ala Tyr Glu Val Lys Ala Asn Gln Arg Asn
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Ile Glu Asp Ile Cys Ile Cys Cys Gly Ser Leu Gln Val His Thr Gln
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His Pro Leu Phe Glu Gly Gly Ile Cys Ala Pro Cys Lys Asp Lys Phe
·65                  70                  75                  80
Leu Asp Ala Leu Phe Leu Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys
                85                  90                  95
Ser Ile Cys Cys Ser Gly Glu Thr Leu Leu Ile Cys Gly Asn Pro Asp
                100                 105                 110
Cys Thr Arg Cys Tyr Cys Phe Glu Cys Val Asp Ser Leu Val Gly Pro
            115                 120                 125
Gly Thr Ser Gly Lys Val His Ala Met Ser Asn Trp Val Cys Tyr Leu
    130                 135                 140
Cys Leu Pro Ser Ser Arg Ser Gly Leu Leu Gln Arg Arg Arg Lys Trp
145                 150                 155                 160
Arg Ser Gln Leu Lys Ala Phe Tyr Asp Arg Glu Ser Glu Asn Pro Leu
                165                 170                 175
Glu Met Phe Glu Thr Val Pro Val Trp Arg Arg Gln Pro Val Arg Val
            180                 185                 190
Leu Ser Leu Phe Glu Asp Ile Lys Lys Glu Leu Thr Ser Leu Gly Phe
            195                 200                 205
Leu Glu Ser Gly Ser Asp Pro Gly Gln Leu Lys His Val Val Asp Val
    210                 215                 220
Thr Asp Thr Val Arg Lys Asp Val Glu Glu Trp Gly Pro Phe Asp Leu
225                 230                 235                 240
Val Tyr Gly Ala Thr Ala Pro Leu Gly His Thr Cys Asp Arg Pro Pro
                245                 250                 255
Ser Trp Tyr Leu Phe Gln Phe His Arg Phe Leu Gln Tyr Ala Arg Pro
                260                 265                 270
Lys Pro Gly Ser Pro Arg Pro Phe Phe Trp Met Phe Val Asp Asn Leu
    275                 280                 285
Val Leu Asn Lys Glu Asp Leu Asp Val Ala Ser Arg Phe Leu Glu Met
    290                 295                 300
Glu Pro Val Thr Ile Pro Asp Val His Gly Gly Ser Leu Gln Asn Ala
305                 310                 ·315                320
Val Arg Val Trp Ser Asn Ile Pro Ala Ile Arg Ser Ser Arg His Trp
                325                 330                 335
Ala Leu Val Ser Glu Glu Glu Leu Ser Leu Leu Ala Gln Asn Lys Gln
            340                 345                 350
Ser Ser Lys Leu Ala Ala Lys Trp Pro Thr Lys Leu Val Lys Asn Cys
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Phe Leu Pro Leu Arg Glu Tyr Phe Lys Tyr Phe Ser Thr Glu Leu Thr
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Ser Ser Leu
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385

<210> 6021
<211> 3145
<212> DNA
<213> Homo sapiens

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<211> 708
<212> PRT
<213> Homo sapiens

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Asp Phe Leu Leu His Val Ala Leu Thr Lys Arg Ala Asp Pro Ala Glu
            35   40   45
Leu Arg Thr Ile Phe Leu Lys Tyr Ala Ser Ile Glu Lys Asn Gly Glu
        50   55   60
Phe Phe Met Ser Pro Asn Asp Phe Val Thr Arg Tyr Leu Asn Ile Phe
65   70   75   80
Gly Glu Ser Gln Pro Asn Pro Lys Thr Val Glu Leu Leu Ser Gly Val
                85   90   95
Val Asp Gln Thr Lys Asp Gly Leu Ile Ser Phe Gln Glu Phe Val Ala
            100   105   110
Phe Glu Ser Val Leu Cys Ala Pro Asp Ala Leu Phe Met Val Ala Phe
            115   120   125
Gln Leu Phe Asp Lys Ala Gly Lys Gly Glu Val Thr Phe Glu Asp Val
        130   135   140
Lys Gln Val Phe Gly Gln Thr Thr Ile His Gln His Ile Pro Phe Asn
145   150   155   160
Trp Asp Ser Glu Phe Val Gln Leu His Phe Gly Lys Glu Arg Lys Arg
                165   170   175
His Leu Thr Tyr Ala Glu Phe Thr Gln Phe Leu Leu Glu Ile Gln Leu
            180   185   190
Glu His Ala Lys Gln Ala Phe Val Gln Arg Asp Asn Ala Arg Thr Gly
            195   200   205
Arg Val Thr Ala Ile Asp Phe Arg Asp Ile Met Val Thr Ile Arg Pro
        210   215   220
His Val Leu Thr Pro Phe Val Glu Glu Cys Leu Val Ala Ala Ala Gly
225   230   235   240
Gly Thr Thr Ser His Gln Val Ser Phe Ser Tyr Phe Asn Gly Phe Asn
                245   250   255
Ser Leu Leu Asn Asn Met Glu Leu Ile Arg Lys Ile Tyr Ser Thr Leu
                260   265   270
Ala Gly Thr Arg Lys Asp Val Glu Val Thr Lys Glu Glu Phe Val Leu
        275   280   285
Ala Ala Gln Lys Phe Gly Gln Val Thr Pro Met Glu Val Asp Ile Leu
        290   295   300
Phe Gln Leu Ala Asp Leu Tyr Glu Pro Arg Gly Arg Met Thr Leu Ala
305   310   315   320
Asp Ile Glu Arg Ile Ala Pro Leu Glu Glu Gly Thr Leu Pro Phe Asn

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Leu Ala Glu Ala Gln Arg Gln Gln Lys Ala Ser Gly Asp Ser Ala Arg
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Pro Val Leu Leu Gln Val Ala Glu Ser Ala Tyr Arg Phe Gly Leu Gly
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Ser Val Ala Gly Ala Val Gly Ala Thr Ala Val Tyr Pro Ile Asp Leu
        370                     375                     380
Val Lys Thr Arg Met Gln Asn Gln Arg Ser Thr Gly Ser Phe Val Gly
385                     390                     395                     400
Glu Leu Met Tyr Lys Asn Ser Phe Asp Cys Phe Lys Lys Val Leu Arg
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Tyr Glu Gly Phe Phe Gly Leu Tyr Arg Gly Leu Leu Pro Gln Leu Leu
            420                     425                     430
Gly Val Ala Pro Glu Lys Ala Ile Lys Leu Thr Val Asn Asp Phe Val
            435                     440                     445
Arg Asp Lys Phe Met His Lys Asp Gly Ser Val Pro Leu Ala Ala Glu
        450                     455                     460
Ile Leu Ala Gly Gly Cys Ala Gly Gly Ser Gln Val Ile Phe Thr Asn
465                     470                     475                     480
Pro Leu Glu Ile Val Lys Ile Arg Leu Gln Val Ala Gly Glu Ile Thr
                485                     490                     495
Thr Gly Pro Arg Val Ser Ala Leu Ser Val Val Arg Asp Leu Gly Phe
            500                     505                     510
Phe Gly Ile Tyr Lys Gly Ala Lys Ala Cys Phe Leu Arg Asp Ile Pro
            515                     520                     525
Phe Ser Ala Ile Tyr Phe Pro Cys Tyr Ala His Val Lys Ala Ser Phe
        530                     535                     540
Ala Asn Glu Asp Gly Gln Val Ser Pro Gly Ser Leu Leu Leu Ala Gly
545                     550                     555                     560
Ala Ile Ala Gly Met Pro Ala Ala Ser Leu Val Thr Pro Ala Asp Val
            565                     570                     575
Ile Lys Thr Arg Leu Gln Val Ala Ala Arg Ala Gly Gln Thr Thr Tyr
            580                     585                     590
Ser Gly Val Ile Asp Cys Phe Arg Lys Ile Leu Arg Glu Glu Gly Pro
        595                     600                     605
Lys Ala Leu Trp Lys Gly Ala Gly Ala Arg Val Phe Arg Ser Ser Pro
        610                     615                     620
Gln Phe Gly Val Thr Leu Leu Thr Tyr Glu Leu Leu Gln Arg Trp Phe
625                     630                     635                     640
Tyr Ile Asp Phe Gly Gly Val Lys Pro Met Gly Ser Glu Pro Val Pro
            645                     650                     655
Lys Ser Arg Ile Asn Leu Pro Ala Pro Asn Pro Asp His Val Gly Gly
            660                     665                     670
Tyr Lys Leu Ala Val Ala Thr Phe Ala Gly Ile Glu Asn Lys Phe Gly
        675                     680                     685
Leu Tyr Leu Pro Leu Phe Lys Pro Ser Val Ser Thr Ser Lys Ala Ile
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Gly Gly Gly Pro
705
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<210> 6023
<211> 1014
<212> DNA
<213> Homo sapiens
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<400> 6023

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180
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240
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1014

<210> 6024
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6024
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Gly Lys Pro Pro His Pro Leu Gly Arg Ser Ile Pro Val Glu Pro Cys
            20   25   30
Pro Gly Leu Pro Ala Phe Ala Glu Val Asp Leu Leu Ser Leu Leu Val
            35   40   45
Pro Ile Lys Ile Ser Ser Thr Pro Pro Ser Gly Ser Arg Leu Asp Pro
        50   55   60
Gln Ile Ala Ser Ser Ala Phe Pro Gly Leu Gly Ser Leu Gly Gly Gln
65   70   75   80
Asp Ser Ser Gly Ser Leu Val Gln Arg Ala Ser Cys Glu Leu Glu Ser

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<210> 6025
<211> 5905
<212> DNA
<213> Homo sapiens


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1320
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4860

gcagggacgc ctgggtgaga ggcaaagggc acagccatgc aaaggccctg gggcaggacg
4920

gcacctggta tgcgggagga acagagtgag gagaggaggg cagggcgtgc agggccttgt
4980

gggcctcagg gaggacttgg gcacctaccc cgagggagtg gagctcctgg gtgcgtgtcc
5040

agatgggaaa ggcagggtcg tatctgtggg gacctgacaa gggcagggga agcggagacc
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5160

caggaggttt ctggatgttt gttgggtttg gtttggtttt gttttgtttt gtttattgtg
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5280

gcagccatcc catctgattc cagaacattc tcatcaccca gaaggcagcc ctgtccccat
5340

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5400

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5460

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5700

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5760

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5880

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5905

<210> 6026
<211> 496
<212> PRT
<213> Homo sapiens

<400> 6026
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            20              25                   30
Pro Ala Ser Ser Pro Val Ser Ser Pro Ser Lys His Gly Asp Arg Phe
            35              40                   45
Ile Pro Ser Arg Ala Gly Ala Asn Trp Ser Val Asn Phe His Arg Ile
    50              55                   60
Asn Glu Asn Glu Lys Ser Pro Ser Gln Asn Arg Lys Ala Lys Asp Ala
65              70                   75                   80
Thr Ser Asp Asn Gly Lys Asp Gly Leu Ala Tyr Ser Ala Leu Leu Lys
            85              90                   95
Asn Glu Leu Leu Gly Ala Gly Ile Glu Lys Val Gln Asp Pro Gln Thr
            100             105                  110
Glu Asp Arg Arg Leu Gln Pro Ser Thr Pro Glu Lys Lys Gly Leu Phe
    115             120                  125
Thr Tyr Ser Leu Ser Thr Lys Arg Ser Ser Pro Asp Asp Gly Asn Asp
    130             135                  140
Val Ser Pro Tyr Ser Leu Ser Pro Val Ser Asn Lys Ser Gln Lys Leu
145             150                  155                  160
Leu Arg Ser Pro Arg Lys Pro Thr Arg Lys Ile Ser Lys Ile Pro Phe
            165             170                  175
Lys Val Leu Asp Ala Pro Glu Leu Gln Asp Asp Phe Tyr Leu Asn Leu
            180             185                  190
Val Asp Trp Ser Ser Leu Asn Val Leu Ser Val Gly Leu Gly Thr Cys
    195             200                  205
Val Tyr Leu Trp Ser Ala Cys Thr Ser Gln Val Thr Arg Leu Cys Asp
    210             215                  220
Leu Ser Val Glu Gly Asp Ser Val Thr Ser Val Gly Trp Ser Glu Arg
225             230                  235                  240
Gly Asn Leu Val Ala Val Gly Thr His Lys Gly Phe Val Gln Ile Trp
            245             250                  255
Asp Ala Ala Ala Gly Lys Lys Leu Ser Met Leu Glu Gly His Thr Ala
            260             265                  270
Arg Val Gly Ala Leu Ala Trp Asn Ala Glu Gln Leu Ser Ser Gly Ser
    275             280                  285
Arg Asp Arg Met Ile Leu Gln Arg Asp Ile Arg Thr Pro Pro Leu Gln
    290             295                  300
Ser Glu Arg Arg Leu Gln Gly His Arg Gln Glu Val Cys Gly Leu Lys
305             310                  315                  320
Trp Ser Thr Asp His Gln Leu Leu Ala Ser Gly Gly Asn Asp Asn Lys
            325             330                  335
Leu Leu Val Trp Asn His Ser Ser Leu Ser Pro Val Gln Gln Tyr Thr
            340             345                  350
Glu His Leu Ala Ala Val Lys Ala Ile Ala Trp Ser Pro His Gln His
    355             360                  365
Gly Leu Leu Ala Ser Gly Gly Gly Thr Ala Asp Arg Cys Ile Arg Phe
    370             375                  380
Trp Asn Thr Leu Thr Gly Gln Pro Leu Gln Cys Ile Asp Thr Gly Ser
385             390                  395                  400
Gln Val Cys Asn Leu Ala Trp Ser Lys His Ala Asn Glu Leu Val Ser
            405             410                  415
Thr His Gly Tyr Ser Gln Asn Gln Ile Leu Val Trp Lys Tyr Pro Ser
            420             425                  430
Leu Thr Gln Val Ala Lys Leu Thr Gly His Ser Tyr Arg Val Leu Tyr
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5208

```
              435                440                445
Leu Ala Met Ser Pro Asp Gly Glu Ala Ile Val Thr Gly Ala Gly Asp
    450                455                460
Glu Thr Leu Arg Phe Trp Asn Val Phe Ser Lys Thr Arg Ser Thr Lys
465                470                475                480
Val Lys Trp Glu Ser Val Ser Val Leu Asn Leu Phe Thr Arg Ile Arg
                485                490                495
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<210> 6027
<211> 305
<212> DNA
<213> Homo sapiens
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<400> 6027
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120
gcggccaccc aaatggagtc ggggcttggg gctgccggga agcccaactg cctggtcatc
180
gatgagatcg acggggcccc cgtggtgggc tccttgatgc ctgggtaggt gggtgggcgg
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300
catca
305
```

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<210> 6028
<211> 75
<212> PRT
<213> Homo sapiens
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<400> 6028
Xaa Pro Gly Leu Gly Lys Thr Thr Leu Ala His Val Ile Ala Arg His
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Ala Gly Tyr Ser Val Val Glu Met Asn Ala Ser Asp Asp Arg Ser Pro
            20                25                30
Glu Val Phe Arg Thr Arg Ile Glu Ala Ala Thr Gln Met Glu Ser Gly
        35                40                45
Leu Gly Ala Ala Gly Lys Pro Asn Cys Leu Val Ile Asp Glu Ile Asp
    50                55                60
Gly Ala Pro Val Val Gly Ser Leu Met Pro Gly
65                70                75
```

```
<210> 6029
<211> 1350
<212> DNA
<213> Homo sapiens
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<400> 6029
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agaagcaggg gtgcccaggc tgtcacagcc ttgcagtgca tggtgggttc cgtggccaac
120
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ttgccagggg acaggcctgt tgctggcact cccccacaa ttacagggtg ggagtgaagg
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acctcgcggc tgcggacagg tccttgttag taaggaggag gctctgcagt cccggtgggg
240
tcatcttgcc tctccggact gctccctctg actggtgaag ccacactctg tgaagctgtc
300
tgacagaagg ggacacgcct ttgctgccca ggatggacct gggccaccca ggatgccgct
360
ggcctcagcc agggcacgtg tgcccagcgc tggctcctgc tgacccctgg actggctccc
420
atctcgggaa tgacgcctgc cgtgggaatc gtggagaggg ggtttaattt aacttggaag
480
gagcacagaa aggaaagtgt ggagtgcgga gcgaggcctc tggtttggcc ggctccggtt
540
gctggggatg gccacaccct ggcagcaggc ggccagagac caggaaggcc tacccagcac
600
ctgtccagaa aagattggtg tgggttgacc tggcctatgc ggggcagctc agtttgaagc
660
aggaacttcc ccaaacgtgc ccaggctcca agacagcagc attcactttg caccgtgctg
720
agcagagcgg ggcctcgcca ggtggaaagc cctaggaagg ctgcgtgctc tgcaaaccca
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840
aaggtcagga aggcgccacc gccctgcccc acgacagctg cgtctgcaag cgccagctct
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gagcactgtt ctccgccgac atgaggacac catccagaa ttcctcctgg gagacctcct
960
gaggagacgc gaagaccatc gatgctttgg aagaatgaaa agaagtttct gctaagccaa
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acctaggtgg atgggaagtg cctgtgtgga tgtgaagcca ccttgggtgg gcggctcgga
1080
gctcctctgc ccacatcgcc tcactgggac tcgccatcca gtctgacgtc tttgatgtcc
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1260
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1320
atgcgcggct tcggcagccc agccgagcct
1350


<210> 6030
<211> 99
<212> PRT
<213> Homo sapiens


<400> 6030
Met Gly Thr Ser Lys Thr Ser Asp Trp Met Ala Ser Pro Ser Glu Ala
1               5                   10                  15
Met Trp Ala Glu Glu Leu Arg Ala Ala His Pro Arg Trp Leu His Ile
            20                  25                  30
His Thr Gly Thr Ser His Pro Pro Arg Phe Gly Leu Ala Glu Thr Ser
```

```
         35                    40                    45
Phe His Ser Ser Lys Ala Ser Met Val Phe Ala Ser Pro Gln Glu Val
     50                    55                    60
Ser Gln Glu Glu Phe Leu Asp Gly Val Leu Met Ser Ala Glu Asn Ser
65                    70                    75                    80
Ala Gln Ser Trp Arg Leu Gln Thr Gln Leu Ser Trp Gly Arg Ala Val
                85                    90                    95
Ala Pro Ser
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<210> 6031
<211> 1316
<212> DNA
<213> Homo sapiens

<400> 6031
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120
gttgccaagt ctacctgtgc catcaacaac accctcattg ctttcttcat tttgactacg
180
ataaaaggca gtgctttcct cagtgctatt tttcttgcct tagcgacata ccagtctctg
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tacccactca ccttgtttgt cccaggactc ctctatctcc tccagcggca gtacatacct
300
gtgaaaatga gagcaaagc cttctggatc ttttcttggg agtatgccat gatgtatgtg
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atcaacgtct tcttctacac catccccctta gccataaagc taaaggagca ccccatcttc
600
ttcatgttta tccagatcgc tgtcatcgcc atctttaagt cctacccgac agtgggggac
660
gtggcgctct acatggcctt cttccccgtg tggaaccatc tctacagatt cctgagaaac
720
atctttgtcc tcacctgcat catcatcgtc tgttccctgc tcttccctgt cctgtggcac
780
ctctggattt atgcaggaag tgccaactct aatttctttt atgccatcac actgaccttc
840
aacgttgggc agatcctgct catctctgat tacttctatg ccttcctgcg gcgggagtac
900
tacctcacac atggcctcta cttgaccgcc aaggatggca cagaggccat gctcgtgctc
960
aagtaggcct ggctggcaca gggctgcatg gacctcaggg ggctgtgggg ccagaagctg
1020
ggccaagccc tccagccaga gttgccagca ggcgagtgct tgggcagaag aggttcgagt
1080
ccagggtcac aagtctctgg taccaaaagg gacccatggc tgactgacag caaggcctat
1140
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ggggaagaac tgggagctcc ccaacttgga cccccacctt gtggctctgc acaccaagga
1200

gcccctccc agacaggaag gagaagaggc aggtgagcag ggcttgttag attgtggcta
1260

cttaataaat gttttttgtt atgaagtcta aaaaaaaaaa aaaaaaaaaa aaaaa
1316

<210> 6032
<211> 321
<212> PRT
<213> Homo sapiens

<400> 6032
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Met Glu Met Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu
            20   25   30
Asn Pro Tyr Thr Ile Leu Ser Cys Val Ala Lys Ser Thr Cys Ala Ile
        35   40   45
Asn Asn Thr Leu Ile Ala Phe Phe Ile Leu Thr Thr Ile Lys Gly Ser
    50   55   60
Ala Phe Leu Ser Ala Ile Phe Leu Ala Leu Ala Thr Tyr Gln Ser Leu
65   70   75   80
Tyr Pro Leu Thr Leu Phe Val Pro Gly Leu Leu Tyr Leu Leu Gln Arg
                85   90   95
Gln Tyr Ile Pro Val Lys Met Lys Ser Lys Ala Phe Trp Ile Phe Ser
            100   105   110
Trp Glu Tyr Ala Met Met Tyr Val Gly Ser Leu Val Val Ile Ile Cys
        115   120   125
Leu Ser Phe Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala Val Tyr
    130   135   140
Gly Phe Ile Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe
145   150   155   160
Trp Tyr Phe Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val
                165   170   175
Cys Val Phe Gln Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile
            180   185   190
Lys Leu Lys Glu His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val
        195   200   205
Ile Ala Ile Phe Lys Ser Tyr Pro Thr Val Gly Asp Val Ala Leu Tyr
    210   215   220
Met Ala Phe Phe Pro Val Trp Asn His Leu Tyr Arg Phe Leu Arg Asn
225   230   235   240
Ile Phe Val Leu Thr Cys Ile Ile Ile Val Cys Ser Leu Leu Phe Pro
                245   250   255
Val Leu Trp His Leu Trp Ile Tyr Ala Gly Ser Ala Asn Ser Asn Phe
            260   265   270
Phe Tyr Ala Ile Thr Leu Thr Phe Asn Val Gly Gln Ile Leu Leu Ile
        275   280   285
Ser Asp Tyr Phe Tyr Ala Phe Leu Arg Arg Glu Tyr Tyr Leu Thr His
    290   295   300
Gly Leu Tyr Leu Thr Ala Lys Asp Gly Thr Glu Ala Met Leu Val Leu
305   310   315   320
Lys

```
<210> 6033
<211> 5157
<212> DNA
<213> Homo sapiens

<400> 6033
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120
caggagcatg acttaaagtt aaacttgaag tttgaaatcg aggttctctg caagaacctt
180
gcattagaca tcaatgagct aaaacctgga aacctcctaa aggataaaga tcgcctgaag
240
aatttagatg agcaactctc tgctccaagg aaagatgtca agcagccaga agaactccct
300
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420
gcaccacaca ttactctaaa tccaacaatt cccttgtttc aggcccatcc acagttgaag
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600
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660
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720
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780
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840
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900
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960
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1380
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3000
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5040

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<210> 6034
<211> 1096
<212> PRT
<213> Homo sapiens

<400> 6034
Lys Asn Leu Ala Leu Asp Ile Asn Glu Leu Lys Pro Gly Asn Leu Leu
 1   5   10   15
Lys Asp Lys Asp Arg Leu Lys Asn Leu Asp Glu Gln Leu Ser Ala Pro
            20   25   30
Arg Lys Asp Val Lys Gln Pro Glu Glu Leu Pro Pro Ile Thr Thr Thr
        35   40   45
Thr Thr Ser Thr Thr Pro Ala Thr Asn Thr Thr Cys Thr Ala Thr Val
    50   55   60
Pro Pro Gln Pro Gln Tyr Ser Tyr His Asp Ile Asn Val Tyr Ser Leu
65   70   75   80
Ala Gly Leu Ala Pro His Ile Thr Leu Asn Pro Thr Ile Pro Leu Phe
                85   90   95
Gln Ala His Pro Gln Leu Lys Gln Cys Val Arg Gln Ala Ile Glu Arg
            100   105   110
Ala Val Gln Glu Leu Val His Pro Val Val Asp Arg Ser Ile Lys Ile
        115   120   125
Ala Met Thr Thr Cys Glu Gln Ile Val Arg Lys Asp Phe Ala Leu Asp
    130   135   140
Ser Glu Glu Ser Arg Met Arg Ile Ala Ala His His Met Met Arg Asn
145   150   155   160
Leu Thr Ala Gly Met Ala Met Ile Thr Cys Arg Glu Pro Leu Leu Met
                165   170   175
Ser Ile Ser Thr Asn Leu Lys Asn Ser Phe Ala Ser Ala Leu Arg Thr
                180   185   190
Ala Ser Pro Gln Gln Arg Glu Met Met Asp Gln Ala Ala Ala Gln Leu
            195   200   205
Ala Gln Asp Asn Cys Glu Leu Ala Cys Cys Phe Ile Gln Lys Thr Ala
    210   215   220
Val Glu Lys Ala Gly Pro Glu Met Asp Lys Arg Leu Ala Thr Glu Phe

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225                     230                     235                     240
Glu Leu Arg Lys His Ala Arg Gln Glu Gly Arg Arg Tyr Cys Asp Pro
                245                     250                     255
Val Val Leu Thr Tyr Gln Ala Glu Arg Met Pro Glu Gln Ile Arg Leu
                260                     265                     270
Lys Val Gly Gly Val Asp Pro Lys Gln Leu Ala Val Tyr Glu Glu Phe
                275                     280                     285
Ala Arg Asn Val Pro Gly Phe Leu Pro Thr Asn Asp Leu Ser Gln Pro
        290                     295                     300
Thr Gly Phe Leu Ala Gln Pro Met Lys Gln Ala Trp Ala Thr Asp Asp
305                     310                     315                     320
Val Ala Gln Ile Tyr Asp Lys Cys Ile Thr Glu Leu Glu Gln His Leu
                325                     330                     335
His Ala Ile Pro Pro Thr Leu Ala Met Asn Pro Gln Ala Gln Ala Leu
                340                     345                     350
Arg Ser Leu Leu Glu Val Val Val Leu Ser Arg Asn Ser Arg Asp Ala
        355                     360                     365
Ile Ala Ala Leu Gly Leu Leu Gln Lys Ala Val Glu Gly Leu Leu Asp
        370                     375                     380
Ala Thr Ser Gly Ala Asp Ala Asp Leu Leu Leu Arg Tyr Arg Glu Cys
385                     390                     395                     400
His Leu Leu Val Leu Lys Ala Leu Gln Asp Gly Arg Ala Tyr Gly Ser
                405                     410                     415
Pro Trp Cys Asn Lys Gln Ile Thr Arg Cys Leu Ile Glu Cys Arg Asp
                420                     425                     430
Glu Tyr Lys Tyr Asn Val Glu Ala Val Glu Leu Leu Ile Arg Asn His
                435                     440                     445
Leu Val Asn Met Gln Gln Tyr Asp Leu His Leu Ala Gln Ser Met Glu
        450                     455                     460
Asn Gly Leu Asn Tyr Met Ala Val Ala Phe Ala Met Gln Leu Val Lys
465                     470                     475                     480
Ile Leu Leu Val Asp Glu Arg Ser Val Ala His Val Thr Glu Ala Asp
                485                     490                     495
Leu Phe His Thr Ile Glu Thr Leu Met Arg Ile Asn Ala His Ser Arg
                500                     505                     510
Gly Asn Ala Pro Glu Gly Leu Pro Gln Leu Met Glu Val Val Arg Ser
        515                     520                     525
Asn Tyr Glu Ala Met Ile Asp Arg Ala His Gly Gly Pro Asn Phe Met
        530                     535                     540
Met His Ser Gly Ile Ser Gln Ala Ser Glu Tyr Asp Asp Pro Pro Gly
545                     550                     555                     560
Leu Arg Glu Lys Ala Glu Tyr Leu Leu Arg Glu Trp Val Asn Leu Tyr
                565                     570                     575
His Ser Ala Ala Ala Gly Arg Asp Ser Thr Lys Ala Phe Ser Ala Phe
        580                     585                     590
Val Gly Gln Val Glu Leu Leu Glu Arg Lys Met His Gln Gln Gly Ile
        595                     600                     605
Leu Lys Thr Asp Asp Leu Ile Thr Arg Phe Phe Arg Leu Cys Thr Glu
        610                     615                     620
Met Cys Val Glu Ile Ser Tyr Arg Ala Gln Ala Glu Gln Gln His Asn
625                     630                     635                     640
Pro Ala Ala Asn Pro Thr Met Ile Arg Ala Lys Cys Tyr His Asn Leu
                645                     650                     655
Asp Ala Phe Val Arg Leu Ile Ala Leu Leu Val Lys His Ser Gly Glu
```

i

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                    660                    665                    670
Ala Thr Asn Thr Val Thr Lys Ile Asn Leu Leu Asn Lys Val Leu Gly
        675                    680                    685
Ile Val Val Gly Val Leu Leu Gln Asp His Asp Val Arg Gln Ser Glu
        690                    695                    700
Phe Gln Gln Leu Pro Tyr His Arg Ile Phe Ile Met Leu Leu Leu Glu
705                    710                    715                    720
Leu Asn Ala Pro Glu His Val Leu Glu Thr Ile Asn Phe Gln Thr Leu
                725                    730                    735
Thr Ala Phe Cys Asn Thr Phe His Ile Leu Arg Pro Thr Lys Ala Pro
                740                    745                    750
Gly Phe Val Tyr Ala Trp Leu Glu Leu Ile Ser His Arg Ile Phe Ile
                755                    760                    765
Ala Arg Met Leu Ala His Thr Pro Gln Gln Lys Gly Trp Pro Met Tyr
        770                    775                    780
Ala Gln Leu Leu Ile Asp Leu Phe Lys Tyr Leu Ala Pro Phe Leu Arg
785                    790                    795                    800
Asn Val Glu Leu Thr Lys Pro Met Gln Ile Leu Tyr Lys Gly Thr Leu
                805                    810                    815
Arg Val Leu Leu Val Leu Leu His Asp Phe Pro Glu Phe Leu Cys Asp
        820                    825                    830
Tyr His Tyr Gly Phe Cys Asp Val Ile Pro Pro Asn Cys Ile Gln Leu
        835                    840                    845
Arg Asn Leu Ile Leu Ser Ala Phe Pro Arg Asn Met Arg Leu Pro Asp
    850                    855                    860
Pro Phe Thr Pro Asn Leu Lys Val Asp Met Leu Ser Glu Ile Asn Ile
865                    870                    875                    880
Ala Pro Arg Ile Leu Thr Asn Phe Thr Gly Val Met Pro Pro Gln Phe
                885                    890                    895
Lys Lys Asp Leu Asp Ser Tyr Leu Lys Thr Arg Ser Pro Val Thr Phe
        900                    905                    910
Leu Ser Asp Leu Arg Ser Asn Leu Gln Val Ser Asn Glu Pro Gly Asn
        915                    920                    925
Arg Tyr Asn Leu Gln Leu Ile Asn Ala Leu Val Leu Tyr Val Gly Thr
    930                    935                    940
Gln Ala Ile Ala His Ile His Asn Lys Gly Ser Thr Pro Ser Met Ser
945                    950                    955                    960
Thr Ile Thr His Ser Ala His Met Asp Ile Phe Gln Asn Leu Ala Val
                965                    970                    975
Asp Leu Asp Thr Glu Gly Arg Tyr Leu Phe Leu Asn Ala Ile Ala Asn
                980                    985                    990
Gln Leu Arg Tyr Pro Asn Ser His Thr His Tyr Phe Ser Cys Thr Met
        995                    1000                   1005
Leu Tyr Leu Phe Ala Glu Ala Asn Thr Glu Ala Ile Gln Glu Gln Ile
    1010                   1015                   1020
Thr Arg Val Leu Leu Glu Arg Leu Ile Val Asn Arg Pro His Pro Trp
1025                   1030                   1035                   1040
Gly Leu Leu Ile Thr Phe Ile Glu Leu Ile Lys Asn Pro Ala Phe Lys
                1045                   1050                   1055
Phe Trp Asn His Glu Phe Val His Cys Ala Pro Glu Ile Glu Lys Leu
        1060                   1065                   1070
Phe Gln Ser Val Ala Gln Cys Cys Met Gly Gln Lys Gln Ala Gln Gln
        1075                   1080                   1085
Val Met Glu Gly Thr Gly Ala Ser
```

                    1090   1095

<210> 6035
<211> 320
<212> DNA
<213> Homo sapiens

<400> 6035
tgatcacaaa gtccctgctg agtctggggg ataggaaggg tctcaatcat ggtccatggg
60
taatctcttt gcccatgtga atgtgcccaa tgtatcaaag gctccattct aaatggcatg
120
gtggggcagt ggtgggcatt gtggctctgt gatctgggcc aggctcccag ccaccctggg
180
ggttccctgc tgggctcctg gaggacctgc ctcaaccctt ggatatgggg ttccacctga
240
cagcaggaaa agagatttga ggcctggagt ccaggcagga cagatggtag aaaccaatgg
300
agatgcatgg ccctggcgcc
320

<210> 6036
<211> 102
<212> PRT
<213> Homo sapiens

<400> 6036
Met His Leu His Trp Phe Leu Pro Ser Val Leu Pro Gly Leu Gln Ala
 1   5   10   15
Ser Asn Leu Phe Ser Cys Cys Gln Val Glu Pro His Ile Gln Gly Leu
            20   25   30
Arg Gln Val Leu Gln Glu Pro Ser Arg Glu Pro Pro Gly Trp Leu Gly
         35   40   45
Ala Trp Pro Arg Ser Gln Ser His Asn Ala His His Cys Pro Thr Met
      50   55   60
Pro Phe Arg Met Glu Pro Leu Ile His Trp Ala His Ser His Gly Gln
65   70   75   80
Arg Asp Tyr Pro Trp Thr Met Ile Glu Thr Leu Pro Ile Pro Gln Thr
               85   90   95
Gln Gln Gly Leu Cys Asp
            100

<210> 6037
<211> 3910
<212> DNA
<213> Homo sapiens

<400> 6037
aagcagccgn agcgtagctt ggctccggcc ctgcctggcg ccctgtctat cacggcgctg
60
tgcactgccc tcgccgagcc cgcctggttg cacatccacg gaggcacctg ttcgcgccag
120
gagctggggg tctccgacgt gttgggctat gtgcacccgg acctgctgaa agatttctgc
180

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atgaatcccc agacagtgct gctcctgcgg gtcatcgccg ccttctgttt cctgggcatc
240
ctgtgtagtc tctccgcttt ccttctggat gtctttgggc cgaagcatcc tgctctgaag
300
atcactcgtc gctatgcctt cgcccatatc ctaacggttc tgcagtgtgc caccgtcatt
360
ggcttttctt attgggcttc tgaactcatc ttggcccagc agcagcagca taagaagtac
420
catggatccc aggtctatgt caccttcgcc gttagcttct acctggtggc aggagctggt
480
ggagcctcaa tcctggccac ggcagccaac ctcctgcgcc actaccccac agaggaagag
540
gagcaggcgc tggagctgct ctcagagatg gaagagaacg agccctaccc ggcggaatat
600
gaggtcatca accagttcca gccacctcct gcttacacac cctaatgcca gccctgggct
660
ctcttcctcg gcagcccctc cctcaactct gcagctcctc tcgcacccag aggagctcct
720
ttccccagca ggcctcactg gtaggatcct gaccatcttc tccaaacctt ccccaggaga
780
gactctgcct ttagggtcat ccaagtatcc ctgctctcag aaccggaggt ccactggttt
840
tctataatgt actctttccc tcctgccaca tcctgccccc ttcacattca cgagtcatta
900
ccagccaggg aaggtcatcc aagtttcctc cagcatgggc gatatctttg ggaccgagac
960
tttccttgga gagctgctga gagcggacag tcccaaaaac aagtgtcaaa gggcccaagg
1020
gaaaggggac tgtgccctgg aggctcactt cacagggatc agtgtttgct ccacagctgt
1080
agctctgggc tgacgccccc cagacccctt ccttctcgga gtgacccgcc cccaggccac
1140
ctgctccggg gagttctgtg cactttactc tttggacttc tcctcacgtg tgccctggtt
1200
ttatggggag agggaatcgc tgttgggaag gcagagcagt tgcaaccctc tctgcccttg
1260
cttcatgtgg ctggagccca ggcaaggaga gcaggagcca gcgtgagact gaggcccct
1320
ggtgcctatc aaggaccaga gtgaagggga ctacatctcc cagcccttca cctttaaat
1380
atgagtggtt ttaaaaggaa aaaatgaaa ccaggcaaca gcaacaatat tctgttttta
1440
aaatagggac aagactgttg tcacttttta gacatgtatc ccattccttt tggctctgca
1500
atatttgggg ctgtagctcc ttccaagccc atggtagtcc ctccccgagt ctctcccagt
1560
agaatgcagc ctcccttccc tggccccttc cctctcagtg acggtgactc cctggggcct
1620
tctcgtggaa cccagagggg ctgaggactg tggcctggct ggcgggccag cgtggtgctc
1680
ctcaggactg cagcactgag atggaacctg cctcagttt aggaacaggg gccacaacag
1740
ggcaggaacc caccaccctc cacataggaa tacaaccagt ggggccacat catgtgaggc
1800
```

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atcagaccca cactgtcagc ccagcaggcc gggctgtgtc cttcagaccc agtgctgccc
1860
tagactctga ctcgggactc cagcttgcca cgtgccctct cccctcttga atgtactctg
1920
gtcttgcagt gtgctgctgg gactttcttg ctcagccatc actctggtca ccttgtttgc
1980
tctgggtctg gctgaatttt ctgccctgag atctgggcat aaagtggatg aaacttgaaa
2040
gaccttcagt gtagatccag atggccaacc tgtccttgtt aagttacttg cttcttggga
2100
atcagtgtcc cctgctgagc tgaaaaggaa atggattcca atctcttcca acctttaagg
2160
tgatagatag tttgagcaag actggagaat ggacaacact atgaagctgt ggctagaaag
2220
ggactgtcat gtcccatcct ttggccagat tgactgggga tgtccggaca gatgcctgca
2280
tgggtggtga gggccacatc tgcacacgag ccagtggctg cttgcagttc actgctgtga
2340
tgccagagtg tgttcaaagg tgactctcct gctcttctgg actcttctct caggcaagaa
2400
aggctgcagg ctgcctgcta tgtgatgcct gagcacaaag ccaaggaact gaactaagtc
2460
tttctgttaa gtcctgagtt tgtcattggc aggtttactt gtggccagct ctctctgccc
2520
ttgggtgtct gagcaggcag accagaagac caggcactgg acctgcatgc caaagggact
2580
ggtcatctcc tgaggacctg tacatgaccc tgtggactgt ccgcacgat ccggaaccca
2640
cttttattc actccccatg tctttggcct tcctcttctt tctctttccc tctgccatcc
2700
tgacactgat agtttgtcat ataaattccc cgggttgtgt ttttttttct agaaaaaaat
2760
taaaagggaa aacaaaacca aaaaaaccag aaaccacgaa taagaatgga aatgacaatg
2820
gctgcctgtt attttctgt cacgattttc ctgatttggt ttgttccctt tgtctcagag
2880
aagcaggaga tgttgatgag gctgtatttt tttttctttt tcttgttttt gagacaagag
2940
tctcgctctg tcacccgggc tggagtgtaa cgtggcatga tctcagctca ctgcaacctc
3000
tgcctcctgg gttcaagcga ttatcctgcc tcagcctcct gagtagctgg gattacaggc
3060
atgcgccact atgcccagat aatttttttg tattttttagt agagacaggg tttcaccatg
3120
ttggccaggc tggtctggaa ctcctaacct caggttatcc acccaccttg gcctcccaaa
3180
gtgctgggat tataggcatg aaccaccgtg cctggccaaa gatgtaattt aaaatagtta
3240
gaagggactt ggcatgggcc agctccgtgc atggcatttt caccoccaga gcttcctaat
3300
cctgttttca cacaggaagt ttctaggtct ttctagaaca gctagaaata gtagctgact
3360
cccgcccaag gcccaacctt caaaccctga gctcttcagg ctgcatcctc tggtgagcta
3420
```

```
tagaggagaa cgtggctcct aaactctagc catcctgtgg gaggaaatag acttctttgg
3480
gctgtggctt gcagaacaaa ctacactttt ttccctcta ttgtttaaat tttatttaat
3540
aatttgtgtg ttttttctgtc tttattttct gtatttcacg tgttccttca ctccctagaa
3600
actgcacttt ctttgaaacc ataggtaatg aatcttacta ggagaggcat ggggatagag
3660
acagttctgg gagtgtgacc tgtaagcctc ctgtagggca gtgccaggcc ttgattgccc
3720
acgttctctc cgttccttct tccttcatac atttgatcac acagcctaca cccagccccg
3780
agtgtgcatc acggtaaaag agctgagggc tctcttcagg gagcagccca tttaggtctc
3840
ttttgttgtt gttagggaga atacacatct ttcttggaaa aaaaaaaaaa aaaaaaaaaa
3900
aaaaaaaagg
3910
```

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<210> 6038
<211> 214
<212> PRT
<213> Homo sapiens

<400> 6038
Lys Gln Pro Xaa Arg Ser Leu Ala Pro Ala Leu Pro Gly Ala Leu Ser
1               5                   10                  15
Ile Thr Ala Leu Cys Thr Ala Leu Ala Glu Pro Ala Trp Leu His Ile
            20                  25                  30
His Gly Gly Thr Cys Ser Arg Gln Glu Leu Gly Val Ser Asp Val Leu
        35                  40                  45
Gly Tyr Val His Pro Asp Leu Leu Lys Asp Phe Cys Met Asn Pro Gln
    50                  55                  60
Thr Val Leu Leu Leu Arg Val Ile Ala Ala Phe Cys Phe Leu Gly Ile
65                  70                  75                  80
Leu Cys Ser Leu Ser Ala Phe Leu Leu Asp Val Phe Gly Pro Lys His
            85                  90                  95
Pro Ala Leu Lys Ile Thr Arg Arg Tyr Ala Phe Ala His Ile Leu Thr
            100                 105                 110
Val Leu Gln Cys Ala Thr Val Ile Gly Phe Ser Tyr Trp Ala Ser Glu
        115                 120                 125
Leu Ile Leu Ala Gln Gln Gln His Lys Lys Tyr His Gly Ser Gln
    130                 135                 140
Val Tyr Val Thr Phe Ala Val Ser Phe Tyr Leu Val Ala Gly Ala Gly
145                 150                 155                 160
Gly Ala Ser Ile Leu Ala Thr Ala Ala Asn Leu Leu Arg His Tyr Pro
            165                 170                 175
Thr Glu Glu Glu Glu Gln Ala Leu Glu Leu Leu Ser Glu Met Glu Glu
            180                 185                 190
Asn Glu Pro Tyr Pro Ala Glu Tyr Glu Val Ile Asn Gln Phe Gln Pro
        195                 200                 205
Pro Pro Ala Tyr Thr Pro
    210
```

<210> 6039
<211> 1130
<212> DNA
<213> Homo sapiens

<400> 6039
nncggnttag ctattttgtt tatccatgca gccgcgtggg cctcggaggg gctcctcgcg
60
gtgctgcgcg ccgggccggg gccggaggcg ttactgcagg tctgggcggc cgaatcggcg
120
ctgcgtgggg agccattgtg ggcccagaat gtggtgcccg aggccgaagg ggaagacgat
180
ccggccggtg aggcccaggc tgggaggcta cccctgctgc cctgcgcccg tgcctacgtg
240
agcccgcggg cgcccttcta ccggcctctg gctccggagc tgcgggcacg ·ccagctggag
300
ctgggcgccg agcacgcgtt gctgctggac gctgctggcc aggtgttctc ctggggcggg
360
ggcaggcatg gacagctggg ccatgggacc ctggaggcag agctggagcc acggctgttg
420
gaggcgttgc agggcctagt catggctgag gtggccgcgg ggggctggca ttctgtgtgt
480
gtgagtgaga ctggggatat ttatatctgg ggctggaatg aatcagggca gctggccctg
540
cccaccagga acctggcaga ggatggagag actgtcgcaa gggaagccac agaactgaat
600
gaagatggtt ctcaggtgaa gagaacgggt ggggctgagg atggagcccc tgccccccttc
660
atagctgtcc agcccttccc ggcattactg gatctcccca tgggctcaga tgcagtcaag
720
gccagctgtg gatcccggca cacagctgtg gtgacacgaa caggggagct ctacacctgg
780
ggctggggta aatatggaca gctgggccac gaggacacca ccagcttgga tcggcctcgc
840
cgtgtggaat actttgtaga taagcaactc caagtaaagg ctgtcacctg tgggccgtgg
900
aacacctacg tgtatgctgt ggagaaaggg aagagctgac atgtgtacgt atatgtatat
960
gcaacacctg tgagaccccc attcaggtca aggaaaacca ttgcctgcac cccaagggcc
1020
ccatatttgc ccctccccat cacagtcctg cccttcaccc tcaagcacgg tcctaaactt
1080
gtctgcactt tagaaacacc tggagagcat tgaaaactct gctgcctaag
1130

<210> 6040
<211> 312
<212> PRT
<213> Homo sapiens

<400> 6040
Xaa Gly Leu Ala Ile Leu Phe Ile His Ala Ala Ala Trp Ala Ser Glu
 1   5   10   15
Gly Leu Leu Ala Val Leu Arg Ala Gly Pro Gly Pro Glu Ala Leu Leu

```
              20                    25                    30
    Gln Val Trp Ala Ala Glu Ser Ala Leu Arg Gly Glu Pro Leu Trp Ala
            35                    40                    45
    Gln Asn Val Val Pro Glu Ala Glu Gly Glu Asp Asp Pro Ala Gly Glu
        50                    55                    60
    Ala Gln Ala Gly Arg Leu Pro Leu Leu Pro Cys Ala Arg Ala Tyr Val
    65                    70                    75                    80
    Ser Pro Arg Ala Pro Phe Tyr Arg Pro Leu Ala Pro Glu Leu Arg Ala
                    85                    90                    95
    Arg Gln Leu Glu Leu Gly Ala Glu His Ala Leu Leu Leu Asp Ala Ala
                100                   105                   110
    Gly Gln Val Phe Ser Trp Gly Gly Gly Arg His Gly Gln Leu Gly His
            115                   120                   125
    Gly Thr Leu Glu Ala Glu Leu Glu Pro Arg Leu Leu Glu Ala Leu Gln
        130                   135                   140
    Gly Leu Val Met Ala Glu Val Ala Ala Gly Gly Trp His Ser Val Cys
    145                   150                   155                   160
    Val Ser Glu Thr Gly Asp Ile Tyr Ile Trp Gly Trp Asn Glu Ser Gly
                    165                   170                   175
    Gln Leu Ala Leu Pro Thr Arg Asn Leu Ala Glu Asp Gly Glu Thr Val
                180                   185                   190
    Ala Arg Glu Ala Thr Glu Leu Asn Glu Asp Gly Ser Gln Val Lys Arg
                195                   200                   205
    Thr Gly Gly Ala Glu Asp Gly Ala Pro Ala Pro Phe Ile Ala Val Gln
        210                   215                   220
    Pro Phe Pro Ala Leu Leu Asp Leu Pro Met Gly Ser Asp Ala Val Lys
    225                   230                   235                   240
    Ala Ser Cys Gly Ser Arg His Thr Ala Val Val Thr Arg Thr Gly Glu
                    245                   250                   255
    Leu Tyr Thr Trp Gly Trp Gly Lys Tyr Gly Gln Leu Gly His Glu Asp
                260                   265                   270
    Thr Thr Ser Leu Asp Arg Pro Arg Arg Val Glu Tyr Phe Val Asp Lys
            275                   280                   285
    Gln Leu Gln Val Lys Ala Val Thr Cys Gly Pro Trp Asn Thr Tyr Val
        290                   295                   300
    Tyr Ala Val Glu Lys Gly Lys Ser
    305                   310
```

<210> 6041
<211> 291
<212> DNA
<213> Homo sapiens

<400> 6041
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acgcgtgaag gggaagaaag agaacgtctg caaaaggagg aagagaaacg taggagagaa
60
gaagaggaaa ggcttcgacg ggaggaagag gaaaggagac ggatagaaga agaaaggctt
120
cggttggagc agcaaaagca gcagataatg gcagctttaa actcccagac tgccgtgcag
180
ttccagcagt atgcagccca acagtatcca gggaactacg aacagcagca aattctcatc
240
cgccagttgc aggagcaaca ctatcagcag tacatgcagc agttgtatca c
291
```

```
<210> 6042
<211> 97
<212> PRT
<213> Homo sapiens

<400> 6042
Thr Arg Glu Gly Glu Glu Arg Glu Arg Leu Gln Lys Glu Glu Glu Lys
1               5                   10                  15
Arg Arg Arg Glu Glu Glu Glu Arg Leu Arg Arg Glu Glu Glu Glu Arg
            20                  25                  30
Arg Arg Ile Glu Glu Glu Arg Leu Arg Leu Glu Gln Gln Lys Gln Gln
        35                  40                  45
Ile Met Ala Ala Leu Asn Ser Gln Thr Ala Val Gln Phe Gln Gln Tyr
    50                  55                  60
Ala Ala Gln Gln Tyr Pro Gly Asn Tyr Glu Gln Gln Gln Ile Leu Ile
65                  70                  75                  80
Arg Gln Leu Gln Glu Gln His Tyr Gln Gln Tyr Met Gln Gln Leu Tyr
                85                  90                  95
His
```

```
<210> 6043
<211> 558
<212> DNA
<213> Homo sapiens

<400> 6043
tttttttttt tttttttttt tttgacattc aaacacaagc tttaatagga gatatcaagg
60
cacagggtgg agggaggggg ttgctccagg gaattctgaa tgtcccagtt catgcagaag
120
ttcaaggtgt cttgtacaac ccactgggga aacaggatct gggaccggtg cgggcacatt
180
ctcctggccc agcacagggg cggtgccacc cacattcggc ccgggtcttg cctaatacat
240
gttttggtaa acactcggtc agagcaccct ctgttttttc cagtcccgaa gctccccgca
300
ggaatccaca ccccgcccc acccctctcg ggacacggat tcaatgtccc tggtgggtca
360
tctggccttt tcggcctgtg atgtgattcg agcggtgcta tctttaacct cgggcagggg
420
tgttctcccc cgtcgacgtt gctcagataa cagtcctgca attccatggg ggtggcggca
480
cccgggtct ggcaaagcat aggggcctgc ttgtgtcccc tgctgctgcc ccaagtagtc
540
agaggaggat gtgaattc
558
```

```
<210> 6044
<211> 152
<212> PRT
<213> Homo sapiens
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<400> 6044

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Met Leu Cys Gln Thr Pro Gly Ala Ala Thr Pro Met Glu Leu Gln Asp
1               5                   10                  15
Cys Tyr Leu Ser Asn Val Asp Gly Gly Glu His Pro Cys Pro Arg Leu
            20                  25                  30
Lys Ile Ala Pro Leu Glu Ser His His Arg Pro Lys Arg Pro Asp Asp
        35                  40                  45
Pro Pro Gly Thr Leu Asn Pro Cys Pro Glu Arg Gly Gly Ala Gly Val
    50                  55                  60
Trp Ile Pro Ala Gly Ser Phe Gly Thr Gly Lys Asn Arg Gly Cys Ser
65                  70                  75                  80
Asp Arg Val Phe Thr Lys Thr Cys Ile Arg Gln Asp Pro Gly Arg Met
                85                  90                  95
Trp Val Ala Pro Pro Leu Cys Trp Ala Arg Arg Met Cys Pro His Arg
            100                 105                 110
Ser Gln Ile Leu Phe Pro Gln Trp Val Val Gln Asp Thr Leu Asn Phe
        115                 120                 125
Cys Met Asn Trp Asp Ile Gln Asn Ser Leu Glu Gln Pro Pro Pro Ser
    130                 135                 140
Thr Leu Cys Leu Asp Ile Ser Tyr
145                 150
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<400> 6045

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420
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780
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1916

<210> 6046
<211> 457
<212> PRT
<213> Homo sapiens

<400> 6046
Thr Arg Val Glu Thr His Phe Gln Pro Arg Gly Ala Gly Glu Gly Gly
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Pro Tyr Gly Cys Lys Asp Ala Leu Arg Gln Gln Leu Arg Ser Ala Arg
            20   25   30
Glu Val Ile Ala Val Val Met Asp Val Phe Thr Asp Ile Asp Ile Phe
        35   40   45
Arg Asp Leu Gln Glu Ile Cys Arg Lys Gln Gly Val Ala Val Tyr Ile
    50   55   60
Leu Leu Asp Gln Ala Leu Leu Ser Gln Phe Leu Asp Met Cys Met Asp

5227

```
65                      70                      75                      80
Leu Lys Val His Pro Glu Gln Glu Lys Leu Met Thr Val Arg Thr Ile
                85                      90                      95
Thr Gly Asn Ile Tyr Tyr Ala Arg Ser Gly Thr Lys Ile Ile Gly Lys
                100                     105                     110
Val His Glu Lys Phe Thr Leu Ile Asp Gly Ile Arg Val Ala Thr Gly
                115                     120                     125
Ser Tyr Ser Phe Thr Trp Thr Asp Gly Lys Leu Asn Ser Ser Asn Leu
                130                     135                     140
Val Ile Leu Ser Gly Gln Val Val Glu His Phe Asp Leu Glu Phe Arg
145                     150                     155                     160
Ile Leu Tyr Ala Gln Ser Lys Pro Ile Ser Pro Lys Leu Leu Ser His
                165                     170                     175
Phe Gln Ser Ser Asn Lys Phe Asp His Leu Thr Asn Arg Lys Pro Gln
                180                     185                     190
Ser Lys Glu Leu Thr Leu Gly Asn Leu Leu Arg Met Arg Leu Ala Arg
                195                     200                     205
Leu Ser Ser Thr Pro Arg Lys Ala Asp Leu Asp Pro Glu Met Pro Ala
                210                     215                     220
Glu Gly Lys Ala Glu Arg Lys Pro His Asp Cys Glu Ser Ser Thr Val
225                     230                     235                     240
Ser Glu Glu Asp Tyr Phe Ser Ser His Arg Asp Glu Leu Gln Ser Arg
                245                     250                     255
Lys Ala Ile Asp Ala Ala Thr Gln Thr Glu Pro Gly Glu Glu Met Pro
                260                     265                     270
Gly Leu Ser Val Ser Glu Val Gly Thr Gln Thr Ser Ile Thr Thr Ala
                275                     280                     285
Cys Ala Gly Thr Gln Thr Ala Val Ile Thr Arg Ile Ala Ser Ser Gln
                290                     295                     300
Thr Thr Ile Trp Ser Arg Ser Thr Thr Thr Gln Thr Asp Met Asp Glu
305                     310                     315                     320
Asn Ile Leu Phe Pro Arg Gly Thr Gln Ser Thr Glu Gly Ser Pro Val
                325                     330                     335
Ser Lys Met Ser Val Ser Arg Ser Ser Ser Leu Lys Ser Ser Ser Ser
                340                     345                     350
Val Ser Ser Gln Gly Ser Val Ala Ser Ser Thr Gly Ser Pro Ala Ser
                355                     360                     365
Ile Arg Thr Thr Asp Phe His Asn Pro Gly Tyr Pro Lys Tyr Leu Gly
                370                     375                     380
Thr Pro His Leu Glu Leu Tyr Leu Ser Asp Ser Leu Arg Asn Leu Asn
385                     390                     395                     400
Lys Glu Arg Gln Phe His Phe Ala Gly Ile Arg Ser Arg Leu Asn His
                405                     410                     415
Met Leu Ala Met Leu Ser Arg Arg Thr Leu Phe Thr Glu Asn His Leu
                420                     425                     430
Gly Leu His Ser Gly Asn Phe Ser Arg Val Asn Leu Leu Ala Val Arg
                435                     440                     445
Asp Val Ala Leu Tyr Pro Ser Tyr Gln
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<210> 6047
<211> 773
<212> DNA
<213> Homo sapiens

<400> 6047
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180
gaggatgggg caagggatcc ggtgtccaac tctgtgtgtc cctgcagctc ccgtagccca
240
gcagggaaga tgaccttctg gcccctaagc aggcggaagg caggtggccg ccgccggagc
300
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420
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480
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773

<210> 6048
<211> 129
<212> PRT
<213> Homo sapiens

<400> 6048
Met Val Lys Arg Val Ser Glu Met Ser Asp Lys Lys Gln Leu Arg Ser
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Arg Ser Cys Arg Pro Pro Gly Ser Ser Ser Gly Ser Pro Ser Ser Thr
            20   25   30
Gly Thr Thr Leu Glu Lys Ser Cys Leu His His Cys Ser Gly Gly Gly
            35   40   45
His Leu Pro Ser Ala Cys Leu Gly Ala Arg Arg Ser Ser Ser Leu Leu
        50   55   60
Gly Tyr Gly Ser Cys Arg Asp Thr Gln Ser Trp Thr Pro Asp Pro Leu
65   70   75   80
Pro His Pro Pro Ser Leu Ser Pro Gln Ser Leu Leu Tyr Ser Gln Ala
                85   90   95
Met Arg Ser Pro Ile Ser His Gln Glu Leu Thr Arg Pro Leu Gly Lys
                100   105   110
Glu Ala Ala Arg Arg Arg Cys Gly His Thr Val Ala Leu Ser Ala Arg
            115   120   125
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<210> 6049
<211> 479
<212> DNA
<213> Homo sapiens

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120
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240
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gaagacaccc tggagtttgt agggtttgat gcgaagatgg ctgaggaatc ctcctcctcc
360
tcctcctcat cttcaccaac tgctgcaaca tctcaggagc agcaacttaa aaataagagt
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479

<210> 6050
<211> 159
<212> PRT
<213> Homo sapiens

<400> 6050
Thr Gly Phe Ser Ser Pro Ser Pro Ser Ala Ala Ala Ala Gln Glu
1   5   10   15
Val Arg Ser Ala Thr Asp Gly Asn Thr Ser Thr Thr Pro Pro Thr Ser
            20   25   30
Ala Lys Lys Arg Lys Leu Asn Ser Ser Ser Ser Ser Ser Asn Ser
        35   40   45
Ser Asn Glu Arg Glu Asp Phe Asp Ser Thr Ser Ser Ser Ser Ser Thr
    50   55   60
Pro Pro Leu Gln Pro Arg Asp Ser Ala Ser Pro Ser Thr Ser Ser Phe
65   70   75   80
Cys Leu Gly Val Ser Val Ala Ala Ser Ser His Val Pro Ile Gln Lys
                85   90   95
Lys Leu Arg Phe Glu Asp Thr Leu Glu Phe Val Gly Phe Asp Ala Lys .
            100   105   110
Met Ala Glu Glu Ser Ser Ser Ser Ser Ser Ser Ser Pro Thr Ala
        115   120   125
Ala Thr Ser Gln Glu Gln Gln Leu Lys Asn Lys Ser Ile Leu Ile Ser
    130   135   140
Ser Val Gly Ser Val His His Ala Asp Gly Leu Ala Glu Ser Ser
145   150   155

<210> 6051
<211> 2404
<212> DNA
<213> Homo sapiens

<400> 6051

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180
gaacttcttg cacagccaca ggttatgaaa ttattagatt cactccgaga gcaatatacc
240
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5231

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1680

cacatttctc tttacatgtt aacaccttgc tactaccaag gcataattac ttaacatgct
1740

tcgaggctgt agattccaag tatcttaaaa gaaggaacta taaacattgc actgaaaact
1800

tgctttaaag ctttacctga cctgtcagtt tgtagacaaa caactgataa taagctttga
1860

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1920

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1980

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2400

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2404

<210> 6052
<211> 518
<212> PRT
<213> Homo sapiens

<400> 6052
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Val Asp Leu Asn Phe Leu Pro Ser Val Asp Pro Glu Thr Val Leu Gln
            20   25   30
Thr Gly His Glu Leu Leu Ser Glu Leu Gln Gln Arg Arg Phe Asn Gly
        35   40   45
Ser Asp Gly Gly Val Ser Trp Ser Pro Met Asp Asp Glu Leu Leu Ala
    50   55   60
Gln Pro Gln Val Met Lys Leu Leu Asp Ser Leu Arg Glu Gln Tyr Thr
65   70   75   80
Arg Tyr Gln Glu Val Cys Arg Gln Arg Ser Lys Arg Thr Gln Leu Glu
                85   90   95
Glu Ile Gln Gln Lys Val Met Gln Val Val Asn Trp Leu Glu Gly Pro
                100   105   110
Gly Ser Glu Gln Leu Arg Ala Gln Trp Gly Ile Gly Asp Ser Ile Arg
            115   120   125
Ala Ser Gln Ala Leu Gln Gln Lys His Glu Glu Ile Glu Ser Gln His

5232

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            130                     135                     140
Ser Glu Trp Phe Ala Val Tyr Val Glu Leu Asn Gln Gln Ile Ala Ala
145                     150                     155                     160
Leu Leu Asn Ala Gly Asp Glu Glu Asp Leu Val Glu Leu Lys Ser Leu
                165                     170                     175
Gln Gln Gln Leu Ser Asp Val Cys Tyr Arg Gln Ala Ser Gln Leu Glu
                180                     185                     190
Phe Arg Gln Asn Leu Leu Gln Ala Ala Leu Glu Phe His Gly Val Ala
                195                     200                     205
Gln Asp Leu Ser Gln Gln Leu Asp Gly Leu Leu Gly Met Leu Cys Val
        210                     215                     220
Asp Val Ala Pro Ala Asp Gly Ala Ser Ile Gln Gln Thr Leu Lys Leu
225                     230                     235                     240
Leu Glu Glu Lys Leu Lys Ser Val Asp Val Gly Leu Gln Gly Leu Arg
                245                     250                     255
Glu Lys Gly Gln Gly Leu Leu Asp Gln Ile Ser Asn Gln Ala Ser Xaa
                260                     265                     270
Gly Pro Met Glu Arg Met Xaa Thr Ile Glu Asn Lys Glu Asn Val Asp
                275                     280                     285
His Ile Gln Gly Val Met Glu Asp Met Gln Leu Arg Lys Gln Arg Cys
        290                     295                     300
Glu Asp Met Val Asp Val Arg Arg Leu Lys Met Leu Gln Met Val Gln
305                     310                     315                     320
Leu Phe Lys Cys Glu Glu Asp Ala Ala Lys Ala Val Glu Trp Leu Ser
                325                     330                     335
Glu Leu Leu Asp Ala Leu Leu Lys Thr His Ile Arg Leu Gly Asp Asp
                340                     345                     350
Ala Gln Glu Thr Lys Val Leu Leu Glu Lys His Arg Lys Phe Val Asp
                355                     360                     365
Val Ala Gln Ser Thr Tyr Asp Tyr Gly Arg Gln Leu Leu Gln Ala Thr
        370                     375                     380
Val Val Leu Cys Gln Ser Leu Arg Cys Thr Ser Arg Ser Ser Gly Asp
385                     390                     395                     400
Thr Leu Pro Arg Leu Asn Arg Val Trp Lys Gln Phe Thr Ile Ala Ser
                405                     410                     415
Glu Glu Arg Val His Arg Leu Glu Met Ala Ile Ala Phe His Ser Asn
                420                     425                     430
Ala Glu Lys Ile Leu Gln Asp Cys Pro Glu Glu Pro Glu Ala Ile Asn
                435                     440                     445
Asp Glu Glu Gln Phe Asp Glu Ile Glu Ala Val Gly Lys Ser Leu Leu
                450                     455                     460
Asp Arg Leu Thr Val Pro Val Val Tyr Pro Asp Gly Thr Glu Gln Tyr
465                     470                     475                     480
Phe Gly Ser Pro Ser Asp Met Ala Ser Thr Ala Glu Asn Ile Arg Asp
                485                     490                     495
Arg Met Lys Leu Val Asn Leu Lys Arg Gln Gln Leu Arg His Pro Glu
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Met Val Thr Thr Glu Ser
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<210> 6053
<211> 3257
<212> DNA
<213> Homo sapiens

<400> 6053

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1560
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3120
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3180
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5235

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3257

<210> 6054
<211> 382
<212> PRT
<213> Homo sapiens

<400> 6054
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            20   25   30
Glu Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met
        35   40   45
Met Ala Arg Gln Lys Gly Ile Phe Tyr Leu Thr Leu Phe Leu Ile Leu
    50   55   60
Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu Ala Val
65   70   75   80
Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu Phe Leu Phe
            85   90   95
Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp Pro Gly Val Ile
            100   105   110
Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile Glu Met Glu Ile Glu
        115   120   125
Ala Thr Asn Gly Ala Val Pro Gln Gly Gln Arg Pro Pro Pro Arg Ile
    130   135   140
Lys Asn Phe Gln Ile Asn Asn Gln Ile Val Lys Leu Lys Tyr Cys Tyr
145   150   155   160
Thr Cys Lys Ile Phe Arg Pro Pro Arg Ala Ser His Cys Ser Ile Cys
                165   170   175
Asp Asn Cys Val Glu Arg Phe Asp His His Cys Pro Trp Val Gly Asn
            180   185   190
Cys Val Gly Lys Arg Asn Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser
        195   200   205
Leu Ser Leu Leu Thr Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val
    210   215   220
Ala Leu Lys Ser Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr
225   230   235   240
Pro Gly Thr Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser
                245   250   255
Val Val Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln
            260   265   270
Thr Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val
    275   280   285
Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu Val
    290   295   300
Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Arg Gly Ile Leu
305   310   315   320
Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln Glu Thr Ser
                325   330   335
Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu His Leu Asn Ser

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              340                 345                 350
Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu Glu Met Pro Pro Pro
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Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala Glu Ala Glu Lys
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<210> 6055
<211> 2089
<212> DNA
<213> Homo sapiens

<400> 6055

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120
gcttacaata accagtcaaa cagattggct gtttcacgaa cagatggcac tgtggaaatt
180
tataacttgt cagcaaacta ctttcaggag aaattttttcc caggtcatga gtctcgggct
240
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300
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360
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480
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540
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720
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960
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1140
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1260
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1380
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1680
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1740
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1920
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1980
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2089

<210> 6056
<211> 285
<212> PRT
<213> Homo sapiens

<400> 6056
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            20   25   30
Val Pro Ser Gly Ile Arg Cys Val Ala Tyr Asn Asn Gln Ser Asn Arg
        35   40   45
Leu Ala Val Ser Arg Thr Asp Gly Thr Val Glu Ile Tyr Asn Leu Ser
    50   55   60
Ala Asn Tyr Phe Gln Glu Lys Phe Phe Pro Gly His Glu Ser Arg Ala
65   70   75   80
Thr Glu Ala Leu Cys Trp Ala Glu Gly Gln Arg Leu Phe Ser Ala Gly
                85   90   95
Leu Asn Gly Glu Ile Met Glu Tyr Asp Leu Gln Ala Leu Asn Ile Lys
            100   105   110
Tyr Ala Met Asp Ala Phe Gly Gly Pro Ile Trp Ser Met Ala Ala Ser
        115   120   125
Pro Ser Gly Ser Gln Leu Leu Val Gly Cys Glu Asp Gly Ser Val Lys
    130   135   140
Leu Phe Gln Ile Thr Pro Asp Lys Ile Gln Phe Glu Arg Asn Phe Asp

5238

```
145                 150                 155                 160
Arg Gln Lys Ser Arg Ile Leu Ser Leu Ser Trp His Pro Ser Gly Thr
                165                 170                 175
His Ile Ala Ala Gly Ser Ile Asp Tyr Ile Ser Val Phe Asp Val Lys
            180                 185                 190
Ser Gly Ser Ala Val His Lys Met Ile Val Asp Arg Gln Tyr Met Gly
        195                 200                 205
Val Ser Lys Arg Lys Cys Ile Val Trp Gly Val Ala Phe Leu Ser Asp
    210                 215                 220
Gly Thr Ile Ile Ser Val Asp Ser Ala Gly Lys Val Gln Phe Trp Asp
225                 230                 235                 240
Ser Ala Thr Gly Thr Leu Val Lys Ser His Leu Ile Ala Asn Ala Asp
            245                 250                 255
Val Gln Ser Ile Ala Val Ala Asp Gln Glu Asp Ser Phe Val Val Gly
        260                 265                 270
Thr Ala Arg Glu Gln Ser Ser Ile Phe Ser Trp Ser Leu
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<210> 6057
<211> 3924
<212> DNA
<213> Homo sapiens

<400> 6057

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180
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480
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gacaacatac cccaataaag ctctggacaa gcacctccta aagcttggaa gaaaatgtgc
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900
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1020
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1080
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2520
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<210> 6058
<211> 500
<212> PRT
<213> Homo sapiens
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<400> 6058
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Pro Ser Ser Thr Lys Val Leu Thr Ser Ser Leu Lys Ser Ser Leu Asn
            20                  25                 30
Phe Glu Lys His Ser Glu Asn Phe Ala Trp Thr Glu Asn Arg Tyr Asp
        35                  40                 45
Val Asn Arg Arg Arg His Asn Ser Ser Asp Gly Phe Asp Ser Ala Ile
    50                  55                 60
Gly Arg Pro Asn Gly Gly Asn Phe Gly Arg Lys Glu Lys Asn Gly Trp
65                  70                 75                     80
Arg Thr His Gly Arg Asn Gly Thr Glu Asn Ile Asn His Arg Gly Gly
            85                  90                 95
Tyr His Gly Gly Ser Ser Arg Ser Arg Ser Ser Ile Phe His Ala Gly
            100                 105                110
Lys Ser Gln Gly Leu His Glu Asn Asn Ile Pro Asp Asn Glu Thr Gly
        115                 120                125
Arg Lys Glu Asp Lys Arg Glu Arg Lys Gln Phe Glu Ala Glu Asp Phe
    130                 135                140
Pro Ser Leu Asn Pro Glu Tyr Glu Arg Glu Pro Asn His Asn Lys Ser
145                 150                155                    160
Leu Ala Ala Gly Val Trp Gly Leu His Ala Gln Thr His Thr Tyr Pro
                165                 170                175
Thr Lys Lys Ile Ser Gln Ala Pro Leu Leu Glu Tyr Pro Pro Asn Pro
            180                 185                190
Lys Ser Arg Ala Pro Arg Met Leu Val Ile Lys Lys Gly Asn Thr Lys
        195                 200                205
Asp Leu Gln Leu Ser Gly Phe Pro Val Val Gly Asn Leu Pro Ser Gln
    210                 215                220
Pro Val Lys Asn Gly Thr Gly Pro Ser Val Tyr Lys Gly Leu Val Pro
225                 230                235                    240
Lys Pro Ala Ala Pro Pro Thr Lys Pro Thr Gln Trp Lys Ser Gln Thr
                245                 250                255
Lys Glu Asn Lys Val Gly Thr Ser Phe Pro His Glu Ser Thr Phe Gly
            260                 265                270
Val Gly Asn Phe Asn Ala Phe Lys Ser Thr Ala Lys Asn Phe Ser Pro
        275                 280                285
Ser Thr Asn Ser Val Lys Glu Cys Asn Arg Ser Asn Ser Ser Ser Pro
    290                 295                300
Val Asp Lys Leu Asn Gln Gln Pro Arg Leu Thr Lys Leu Thr Arg Met
305                 310                315                    320
Arg Thr Asp Lys Lys Ser Glu Phe Leu Lys Ala Leu Lys Arg Asp Arg
            325                 330                335
Val Glu Glu His Glu Asp Glu Ser Arg Ala Gly Ser Glu Lys Asp
        340                 345                350
Asp Asp Ser Phe Asn Leu His Asn Ser Asn Ser Thr His Gln Glu Arg
        355                 360                365
Asp Ile Asn Arg Asn Phe Asp Glu Asn Glu Ile Pro Gln Glu Asn Gly
    370                 375                380
Asn Ala Ser Val Ile Ser Gln Gln Ile Ile Arg Ser Ser Thr Phe Pro
385                 390                395                    400
Gln Thr Asp Val Leu Ser Ser Ser Leu Glu Ala Glu His Arg Leu Leu
            405                 410                415
Lys Glu Met Gly Trp Gln Glu Asp Ser Glu Asn Asp Glu Thr Cys Ala
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                420                   425                   430
 Pro Leu Thr Glu Asp Glu Met Arg Glu Phe Gln Val Ile Ser Glu Gln
          435                   440                   445
 Leu Gln Lys Asn Gly Leu Arg Lys Asn Gly Ile Leu Lys Asn Gly Leu
      450                   455                   460
 Ile Cys Asp Phe Lys Phe Gly Pro Trp Lys Asn Ser Thr Phe Lys Pro
 465                   470                   475                   480
 Thr Thr Glu Asn Asp Asp Thr Glu Thr Ser Ser Ser Asp Thr Ser Asp
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 Asp Asp Asp Val
              500
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<210> 6059
<211> 1442
<212> DNA
<213> Homo sapiens

<400> 6059
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120
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360
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420
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480
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1020
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1080
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5243

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1260
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1442

<210> 6060
<211> 313
<212> PRT
<213> Homo sapiens

<400> 6060
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            20   25   30
Ile Ser Tyr Thr Ile Thr Ile Phe Gly Asn Val Ser Ile Met Met Val
        35   40   45
Cys Ile Leu Asp Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
    50   55   60
Asn Leu Ser Ile Leu Asp Leu Cys Tyr Thr Thr Thr Thr Val Pro His
65   70   75   80
Met Leu Val Asn Ile Gly Cys Asn Lys Lys Thr Ile Ser Tyr Ala Gly
                85   90   95
Cys Val Ala His Leu Ile Ile Phe Leu Ala Leu Gly Ala Thr Glu Cys
            100   105   110
Leu Leu Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Arg
        115   120   125
Pro Leu His Tyr Val Val Ile Met Asn Tyr Trp Phe Cys Leu Arg Met
    130   135   140
Ala Ala Phe Ser Trp Leu Ile Gly Phe Gly Asn Ser Val Leu Gln Ser
145   150   155   160
Ser Leu Thr Leu Asn Met Pro Arg Cys Gly His Gln Glu Val Asp His
                165   170   175
Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
            180   185   190
Lys Pro Ile Glu Ala Glu Leu Phe Phe Phe Ser Val Leu Ile Leu Leu
        195   200   205
Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Gly Phe Ile Ala Gln Ala
    210   215   220
Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
225   230   235   240
Cys Gly Ser His Met Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
                245   250   255
Tyr Met Tyr Leu Gln Pro Pro Ser Ser Thr Ser Lys Asp Trp Gly Lys

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            260                265                270
Met Val Ser Leu Phe Tyr Gly Ile Ile Thr Ser Met Leu Asn Ser Leu
        275                280                285
Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Glu Ala Phe Lys Arg Leu
    290                295                300
Met Pro Arg Ile Phe Phe Cys Lys Lys
305                310
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<210> 6061
<211> 1582
<212> DNA
<213> Homo sapiens
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120
ccatcctctt ccccaatttg ccacttccag cagctttagc ccatgaggag gatgtgaccg
180
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240
ctggccacca tctttctggc ttcgtttgca gccttggtgc tggtttgcag gcagcgctac
300
tgccggccgc gagacctgct gcagcgctat gattctaagc ccattgtgga cctcattggt
360
gccatggaga cccagtctga gccctctgag ttagaactgg acgatgtcgt tatcaccaac
420
ccccacattg aggccattct ggagaatgaa gactggatcg aagatgcctc gggtctcatg
480
tcccactgca ttgccatctt gaagatttgt cacactctga cagagaagct tgttgccatg
540
acaatgggct ctggggccaa gatgaagact tcagccagtg tcagcgacat cattgtggtg
600
gccaagcgga tcagccccag ggtggatgat gttgtgaagt cgatgtaccc tccgttggac
660
cccaaactcc tggacgcacg gacgactgcc ctgctcctgt ctgtcagtca cctggtgctg
720
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780
gctgctgagg agcatttgga agtccttcga gaagcagccc tagcttctga gccagataaa
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900
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960
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1020
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1080
gcagtctaat actacagtta ggggagatgc cattcactct ctgcaagagg agtattgaaa
1140
actggtggac tgtcagcttt atttagctca cctagtgttt tcaagaaaat tgagccaccg
1200
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tctaagaaat caagaggttt cacattaaaa ttagaatttc tggcctctct cgatcggtca
1260
gaatgtgtgg caattctgat ctgcattttc agaagaggac aatcaattga aactaagtag
1320
gggtttcttc ttttggcaag acttgtactc tctcacctgg cctgtttcat ttatttgtat
1380
tatctgcctg gtccctgagg cgtctgggtc tctcctctcc cttgcaggtt tgggtttgaa
1440
gctgaggaac tacaaagttg atgatttctt ttttatcttt atgcctgcaa ttttacctag
1500
ctaccactag gtggatagta aatttatact tatgtttcaa aaaaaaatca tcaactttgt
1560
agttcctcag cttcagtcga cg
1582
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<210> 6062
<211> 226
<212> PRT
<213> Homo sapiens
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<400> 6062
Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile Phe
1               5                   10                  15
Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg Tyr Cys
            20                  25                  30
Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro Ile Val Asp
        35                  40                  45
Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser Glu Leu Glu Leu
    50                  55                  60
Asp Asp Val Val Ile Thr Asn Pro His Ile Glu Ala Ile Leu Glu Asn
65                  70                  75                  80
Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu Met Ser His Cys Ile Ala
            85                  90                  95
Ile Leu Lys Ile Cys His Thr Leu Thr Glu Lys Leu Val Ala Met Thr
            100                 105                 110
Met Gly Ser Gly Ala Lys Met Lys Thr Ser Ala Ser Val Ser Asp Ile
            115                 120                 125
Ile Val Val Ala Lys Arg Ile Ser Pro Arg Val Asp Asp Val Val Lys
    130                 135                 140
Ser Met Tyr Pro Pro Leu Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr
145                 150                 155                 160
Ala Leu Leu Leu Ser Val Ser His Leu Val Leu Val Thr Arg Asn Ala
            165                 170                 175
Cys His Leu Thr Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala
            180                 185                 190
Ala Glu Glu His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu
        195                 200                 205
Pro Asp Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser
    210                 215                 220
Ala Ile
225
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<210> 6063
<211> 2286
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<212> DNA
<213> Homo sapiens

<400> 6063
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120
ggcggcgctg agcggctggt gttggacgcg gcgctggcgc tgcaggcgcg cgggtgtagc
180
gtgaagatct ggacagcgca ctacgacccg ggccactgtt tcgccgagag ccgcgagcta
240
ccggtgcgct gtgccgggga ctggctgccg cgaggcctgg gctggggcgg ccgcggcgcc
300
gccgtctgcg cctacgtgcg catggttttc ctggcgctct acgtgctgtt cctcgccgac
360
gaggagttcg acgtggtagt gtgcgaccag gtgtctgcct gtatcccagt gttcaggctg
420
gctagacggc ggaagaagat cctattttac tgtcacttcc cagatctgct tctcaccaag
480
agagattctt ttcttaaacg actatacagg gccccaattg actggataga ggaatacacc
540
acaggcatgg cagactgcat cttagtcaac agccagttca cagctgctgt ttttaaggaa
600
acattcaagt ccctgtctca catagaccct gatgtcctct atccatctct aaatgtcacc
660
agctttgact cagttgttcc tgaannaagc tggatgacct agtccccaag gggaaaaaaa
720
ttcctgctgc tctccatcaa cagatacgaa aggaagaaaa atctgacttt ggcactggaa
780
gccctagtac agctgcgtgg aagattgaca tcccaagatt gggagagagt tcatctgatc
840
gtggcaggtg gttatgacga gagagtcctg gagaatgtgg aacattatca ggaattgaag
900
aaaatggtcc aacagtccga ccttggccag tatgtgacct tcttgaggtc tttctcagac
960
aaacagaaaa tctccctcct ccacagctgc acgtgtgtgc tttacacacc aagcaatgag
1020
cactttggca ttgtccctct ggaagccatg tacatgcagt gcccagtcat tgctgttaat
1080
tcgggtggac ccttggagtc cattgaccac agtgtcacag ggtttctgtg tgagcctgac
1140
ccggtgcact tctcagaagc aatagaaaag ttcatccgtg aaccttcctt aaaagccacc
1200
atgggcctgg ctggaagagc cagagtgaag gaaaaatttt cccctgaagc atttacagaa
1260
cagctctacc gatatgttac caaactgctg gtataatcag attgttttta agatctccat
1320
taatgtcatt tttatggatt gtagacccag ttttgaaacc aaaaaagaaa cctagaatct
1380
aatgcagaag agatctttta aaaaataaac ttgagtcttg aatgtgagcc actttcctat
1440
ataccacacc tccctgtcca cttttcagaa aaaccatgtc ttttatgcta taatcattcc
1500

aaattttgcc agtgttaagt tacaaatgtg gtgtcattcc atgttcagca gagtatttta
1560
attatatttt ctcgggatta ttgctcttct gtctataaat tttgaatgat actgtgcctt
1620
aattggtttt catagtttaa gtgtgtatca ttatcaaagt tgattaattt ggcttcatag
1680
tataatgaga gcagggctat tgtagttccc agattcaatc caccgaagtg ttcactgtca
1740
tctgttaggg aatttttgtt tgtcctgtct ttgcctggat ccatagcgag agtgctctgt
1800
attttttta agataatttg tattttgca cactgagata taataaaagg tgtttatcat
1860
aaaaaagaaa cagtattaga ttttggtctc cataatctat tttggtattg ttacgaacat
1920
ggatatgaca accaaactgg aaatcagaac actagggtaa agtggatatt gaaatgaagc
1980
aagaatattg tcacacatgt gttgtgcatc ttgtttaggg tatatttctt aatgtcatct
2040
aggtcattag ttttgttaat atttgtgttg tcttgaccaa gctcctacta agtataggac
2100
acaaatgttt tttatcttcc aaggcctggc tcaaatgcca ctgctgcaaa gctttctttg
2160
accctctggc cacctcccaa gccagaagtt atcttccccc tccatgtact ctagcctttt
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2280
acagca
2286

<210> 6064
<211> 233
<212> PRT
<213> Homo sapiens

<400> 6064
Xaa Arg Val Lys Gly Ala Gly Cys Ser Cys Gly Ser Arg Ala Met Ala
1   5   10   15
Glu Glu Gln Gly Arg Glu Arg Asp Ser Val Pro Lys Pro Ser Val Leu
            20   25   30
Phe Leu His Pro Asp Leu Gly Val Gly Gly Ala Glu Arg Leu Val Leu
        35   40   45
Asp Ala Ala Leu Ala Leu Gln Ala Arg Gly Cys Ser Val Lys Ile Trp
    50   55   60
Thr Ala His Tyr Asp Pro Gly His Cys Phe Ala Glu Ser Arg Glu Leu
65   70   75   80
Pro Val Arg Cys Ala Gly Asp Trp Leu Pro Arg Gly Leu Gly Trp Gly
                85   90   95
Gly Arg Gly Ala Ala Val Cys Ala Tyr Val Arg Met Val Phe Leu Ala
            100   105   110
Leu Tyr Val Leu Phe Leu Ala Asp Glu Glu Phe Asp Val Val Val Cys
        115   120   125
Asp Gln Val Ser Ala Cys Ile Pro Val Phe Arg Leu Ala Arg Arg Arg
    130   135   140
Lys Lys Ile Leu Phe Tyr Cys His Phe Pro Asp Leu Leu Leu Thr Lys

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145                    150                    155                    160
Arg Asp Ser Phe Leu Lys Arg Leu Tyr Arg Ala Pro Ile Asp Trp Ile
                165                    170                    175
Glu Glu Tyr Thr Thr Gly Met Ala Asp Cys Ile Leu Val Asn Ser Gln
                180                    185                    190
Phe Thr Ala Ala Val Phe Lys Glu Thr Phe Lys Ser Leu Ser His Ile
            195                    200                    205
Asp Pro Asp Val Leu Tyr Pro Ser Leu Asn Val Thr Ser Phe Asp Ser
        210                    215                    220
Val Val Pro Glu Xaa Ser Trp Met Thr
225                    230
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```
<210> 6065
<211> 2084
<212> DNA
<213> Homo sapiens
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<400> 6065
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gccatcagag agtcagcaaa ggtagttgac caagctcaaa ggagagtgtt gaggggagtt
120
gatgaccttg acttttcat aggagatgaa gccatcgata aacctacata tgctacaaag
180
tggccgattc gacatggaat cattgaagac tgggatctta tggaaaggtt catggagcaa
240
gtggtttta aatatcttcg agctgaacct gaggaccatt attttttaat ggggtaacta
300
tctccttcct gctgtaatca gtggccacca gaacctcccc ctccaacccc cgaaaacaga
360
gagtatcttg cagaaattat gtttgaatca tttaacgtac caggactcta cattgcagtt
420
caggcagtgc tggccttggc ggcatcttgg acatctcgac aagtgggtga acgtacgtta
480
acggggatag tcattgacag cggagatgga gtcacccatg ttatcccagt ggcagaaggt
540
tatgtaattg gaagctgcat caaacacatc ccgattgcag gtagagatat tacgtatttc
600
attcaacagc tgctaaggga gagggaggtg ggaatccctc ctgagcagtc actggagacc
660
gcaaaagcca ttaaggagaa atactgttac atttgccccg atatagtcaa ggaatttgcc
720
aagtatgatg tggatccccg gaagtggatc aaacagtaca cgggtatcaa tgcgatcaac
780
cagaagaagt ttgttataga cgttggttac gaaagattcc tgggacctga aatattcttt
840
cacccggagt ttgccaaccc agactttatg gagtccatct cagatgttgt tgatgaagta
900
atacagaact gccccatcga tgtgcggcgc ccgctgtata agaatgtcgt actctcagga
960
ggctccacca tgttcaggga tttcggacgc cgactgcaga gggatttgaa gagagtggtg
1020
gatgctaggc tgaggctcag cgaggagctc agcggcggga ggatcaagcc gaagcctgtg
1080
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gaggtccagg tggtcacgca tcacatgcag cgctacgccg tgtggttcgg aggctccatg
1140

ctggcctcga ctcccgagtt ctttcaggtc tgccacacca agaaggacta tgaagagtac
1200

gggcccagca tctgccgcca caaccccgtc tttggagtca tgtcctagtg tctgcctgaa
1260

cgcgtcgttc gatggtgtca cgttggggaa caagtgtcct tcagaaccca gagaaggccg
1320

ccgttctgta aatagcgacg tcggtgttgc tgcccagcag cgtgcttgca ttgccggtgc
1380

atgaggcgcg gcgcgggccc ttcagtaaaa gccatttatc cgtgtgccga ccgctgtctg
1440

ccagcctcct ccttctcccg ccctcctcac cctcgctctc cctcctcctc ctcctccgag
1500

ctgctagctg acaaatacaa ttctgaagga atccaaatgt gactttgaaa attgttagag
1560

aaaacaacat tagaaatgg cgcaaaatcg ttaggtccca ggagagaatg tggggcgca
1620

aacccttttc ctcccagcct attttgtaa ataaaatgtt taaacttgaa atacaaatcg
1680

atgtttatat ttcctatcat tttgtatttt atggtatttg gtacaactgg ctgatactaa
1740

gcacgaatag atattgatgt tatggagtgc tgtaatccaa agtttttaat tgtgaggcat
1800

gttctgatat gtttataggc aaacaaataa aacagcaaac ttttttgcca catgtttgct
1860

agaaaatgat tatactttat tggagtgaca tgaagtttga acactaaaca gtaatgtatg
1920

agaattacta cagatacatg tatcttttag ttttttttgt ttgaactttc tggagctgtt
1980

ttatagaaga tgatggtttg ttgtcggtga gtgttggatg aaatacttcc ttgcaccatt
2040

gtaataaaag ctgttagaat atttgtaaat atcaaaaaaa aaaa
2084

<210> 6066
<211> 80
<212> PRT
<213> Homo sapiens

<400> 6066
Gly Ile Ala Ile Arg Glu Ser Ala Lys Val Val Asp Gln Ala Gln Arg
1   5   10   15
Arg Val Leu Arg Gly Val Asp Asp Leu Asp Phe Phe Ile Gly Asp Glu
            20   25   30
Ala Ile Asp Lys Pro Thr Tyr Ala Thr Lys Trp Pro Ile Arg His Gly
            35   40   45
Ile Ile Glu Asp Trp Asp Leu Met Glu Arg Phe Met Glu Gln Val Val
        50   55   60
Phe Lys Tyr Leu Arg Ala Glu Pro Glu Asp His Tyr Phe Leu Met Gly
65   70   75   80

<210> 6067
<211> 406

5250

<212> DNA
<213> Homo sapiens

<400> 6067
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tccctgagct gactgcaccc ctcttcctgg gtagcggtgg cctccccaca gcactgtgtg
120
aatatgctgg gcatggggcg gctcgggcca ctgctccctg ccaaacgga agccctggag
180
ggcatggcca gtgcctggga catgcagggg gctcactgga cgactagcg gtcctcatcc
240
tcctagaact tacattccca gagagaaaga gactcctggg aattataaga gtggagaaag
300
gactataata atcgcaacag ctaacactct tccagctaac actgcatgct gggcactgtc
360
ccgagtacat gaccaccctc acaatactcc tgcagagcgc acgcgt
406

<210> 6068
<211> 117
<212> PRT
<213> Homo sapiens

<400> 6068
Met Tyr Ser Gly Gln Cys Pro Ala Cys Ser Val Ser Trp Lys Ser Val
1   5   10   15
Ser Cys Cys Asp Tyr Tyr Ser Pro Phe Ser Thr Leu Ile Ile Pro Arg
            20   25   30
Ser Leu Phe Leu Ser Gly Asn Val Ser Ser Arg Arg Met Arg Thr Ala
        35   40   45
Ser Arg Ser Ser Glu Pro Pro Ala Cys Pro Arg His Trp Pro Cys Pro
    50   55   60
Pro Gly Leu Pro Phe Gly Gln Gly Ala Val Ala Arg Ala Ala Pro Cys
65   70   75   80
Pro Ala Tyr Ser His Ser Ala Val Gly Arg Pro Pro Leu Pro Arg Lys
            85   90   95
Arg Gly Ala Val Ser Ser Gly Arg Leu His Arg Arg Gly Thr Gly Ala
            100   105   110
Met Trp Trp Glu Gly
        115

<210> 6069
<211> 456
<212> DNA
<213> Homo sapiens

<400> 6069
ngggaaggcc taaaaaatgt cattttacc aactgtgtaa aggatgaaaa tgtcaagcag
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atcatcccga tggtcactga actgattggg agaagccacc gctaccaccg aaaagagaac
120
ctggagtact gtatcatggt cattggggtc cccaacgtgg gcaagtcctc cctcatcaac
180

tccctccgga ggcagcacct caggaaaggg aaagccacca gggtgggtgg cgagcctggg
240
atcaccagag ctgtgatgtc caaaattcag gtggagtcct caggggccag gcccagcact
300
ctgtcaagag ctctgcaggc gtctggcacc tgccgacctc tgtgtggctt ccggctgctg
360
accacgcttc cctcccctcc actcagtgtc cccgctgagc accccggggg caggcactgc
420
cctgccctta ttccacagtc gtcatagtct ttgcgc
456

<210> 6070
<211> 148
<212> PRT
<213> Homo sapiens

<400> 6070
Xaa Glu Gly Leu Lys Asn Val Ile Phe Thr Asn Cys Val Lys Asp Glu
1   5   10   15
Asn Val Lys Gln Ile Ile Pro Met Val Thr Glu Leu Ile Gly Arg Ser
            20   25   30
His Arg Tyr His Arg Lys Glu Asn Leu Glu Tyr Cys Ile Met Val Ile
        35   40   45
Gly Val Pro Asn Val Gly Lys Ser Ser Leu Ile Asn Ser Leu Arg Arg
    50   55   60
Gln His Leu Arg Lys Gly Lys Ala Thr Arg Val Gly Gly Glu Pro Gly
65   70   75   80
Ile Thr Arg Ala Val Met Ser Lys Ile Gln Val Glu Ser Ser Gly Ala
                85   90   95
Arg Pro Ser Thr Leu Ser Arg Ala Leu Gln Ala Ser Gly Thr Cys Arg
            100   105   110
Pro Leu Cys Gly Phe Arg Leu Leu Thr Thr Leu Pro Ser Pro Pro Leu
        115   120   125
Ser Val Pro Ala Glu His Pro Arg Gly Arg His Cys Pro Ala Leu Ile
    130   135   140
Pro Gln Ser Ser
145

<210> 6071
<211> 2633
<212> DNA
<213> Homo sapiens

<400> 6071
nctgaggcgg gtggcatggc ggagaaggat gacaccggag tttgacgaag aggtggtttt
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tgagaattct ccactttacc aatacttaca ggatctggga cacacagact ttgaaatatg
120
ttcttctttg tcaccaaaaa cagaaaaatg cacaacagag ggacaacaaa agcctcctac
180
aagagtccta ccaaaatacc tgggatatag taatcactca atgaatataa actgcactta
240
ctggcatgct caaggaatgg gctattaagc aaggtatcct gttaaaagtg gctgaaacca
300

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tcaaaagttg gatttttttt tctcagtgca ataagaaaga tgacttactt cacaagttgg
360
atattggatt ccgactcgac tcattacata ccatcctgca acaggaagtc ctgttacaag
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480
aacaggaaaa tggacacctt ccaacacttt gctccctggc accccctaat atttgggatc
540
tctcaatgct atttgccttc attagcttgc tcgttatgct tcccacttgg tggattgtgt
600
cttcctggct ggtatgggga gtgattctat ttgtgtatct ggtcataaga gctttgagat
660
tatggaggac agccaaacta caagtgaccc taaaaaaata cagcgttcat ttggaagata
720
tggccacaaa cagccgagct tttactaacc tcgtgagaaa agctttacgt ctcattcaag
780
aaaccgaagt gatttccaga ggatttacac tggtcagtgc tgcttgccca tttaataaag
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900
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1020
ttggacttag tgaagagcag atttcagaag aggaagcaca taactttaca gatggcttca
1080
gcctgcctgc attgaaggtt ttgttccaac tctgggtggc acagagttca gagttcttca
1140
gacggttagc cctattactt tctacagcca attcacctcc tgggccctta cttactccag
1200
cacttctgcc tcatcgtatc ttatctgatg tgactcaagg tctacctcat gctcattctg
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1320
agtcagtacc gcagtgttta tccaaaactc aacagaagtc aagagaactg aataatgttc
1380
acacagcagt gcgtagcttg cagctccatc tgaaagcatt actgaatgag gtaataattc
1440
ttgaagatga acttgaaaag cttgtttgta ctaaagaaac acaagaacta gtgtcagagg
1500
cttatcccat cctagaacag aaattaaagt tgattcagcc ccacgttcaa gcaagcaaca
1560
attgctggga agaggccatt tctcaggtcg acaaactgct acgaagaaat acagataaaa
1620
aaggcaagcc tgaaatagca tgtgaaaacc cacattgtac agtagtacct ttgaagcagc
1680
ctactctaca cattgcagac aaagatccaa tcccagagga gcaggaatta gaagcttatg
1740
tagatgatat agatattgat agtgatttca gaaaggatga tttttattac ttgtctcaag
1800
aagacaaaga gagacagaag cgtgagcatg aagaatccaa gagggtgctc caagaattaa
1860
aatctgtgct gggatttaaa gcttcagagg cagaaaggca gaagtggaag caacttctat
1920
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5253

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ttagtgatca tggtaagcac tgactttaaa gtaacaggtt atttcaatgt aggggattct
1980
ttctttcttg aaccatgaat gttattttag ctgaagaatt cttggggttt tataagggtc
2040
caccagtatg catagtactt tttcttctag atgctaaatc aatttgatta ataaaagagt
2100
aggaatgtaa tcacattgga aatatgaagt catacttttt tatgagttat ttaatttttt
2160
agtaaatttg ttttagaatg ggcagtgagt tgaataattt gggatatttt aaatgttatt
2220
ttcaaattta gtgaatttga gattctcaac tctgttgtcc atatgttaaa atatttaaaa
2280
atacctcagt gaagcacaaa attaataact gtgctcacat tgaaaaaaat ggcccaggcg
2340
cggcggcaca tgcttgtaat atcagcacgt tgggaagctg aggcgggtgg atcatttgag
2400
gtcaggagtt caagaccagc ctggccaaca tggcgaaacc ccatctctac taaaaataca
2460
aaaattaaca aggcatggtg gcgcgtgcct gtagtcccag ctactcgaga ggctgaggca
2520
ggagaatcac ttgaacccgg gaggcggagg tttcagtgag ccaagatcac gccactgcac
2580
tccagcctgg gcaacagang ggagactcca tctcaaaaaa aaaaaaaaaa aaa
2633
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<210> 6072
<211> 76
<212> PRT
<213> Homo sapiens

<400> 6072
Met Ala Gln Ala Arg Arg His Met Leu Val Ile Ser Ala Arg Trp Glu
1               5                   10                  15
Ala Glu Ala Gly Gly Ser Phe Glu Val Arg Ser Ser Arg Pro Ala Trp
            20                  25                  30
Pro Thr Trp Arg Asn Pro Ile Ser Thr Lys Asn Thr Lys Ile Asn Lys
        35                  40                  45
Ala Trp Trp Arg Val Pro Val Val Pro Ala Thr Arg Glu Ala Glu Ala
    50                  55                  60
Gly Glu Ser Leu Glu Pro Gly Arg Arg Arg Phe Gln
65                  70                  75
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<210> 6073
<211> 387
<212> DNA
<213> Homo sapiens

<400> 6073
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tgaccccagc cagccttggc tctcgggttg ggaaatacag tcacggtatc catggagacc
120
tcttgaggtg gagacgggcg ttaaaccctt ctcaggcagt ctgaggtggc cagagtctga
180
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agcaagcagc ctctatggag cgaggggagc aggtgggccc agcctgagcg gggcctctgc
240
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387


<210> 6074
<211> 69
<212> PRT
<213> Homo sapiens


<400> 6074
Ser Lys Gln Pro Leu Trp Ser Glu Gly Ser Arg Trp Ala Gln Pro Glu
1               5                   10                  15
Arg Gly Leu Cys Thr Ala Ser Phe Pro Pro His Leu Ser Pro Ala Arg
            20                  25                  30
Ala Pro Thr Gly Pro Phe Ser Pro Arg Met Lys Pro Ala Gly Ser Val
            35                  40                  45
Asn Asp Met Ala Leu Asp Ala Phe Asp Leu Asp Arg Met Lys Gln Glu
        50                  55                  60
Ile Leu Glu Glu Val
65


<210> 6075
<211> 4668
<212> DNA
<213> Homo sapiens


<400> 6075
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120
ctcattacag catctggctg tactctaaca tatacaaata tgtttctggt tcaacatctc
180
ctgtgcacgg agaaagcaca ggcatgtttc tcacaagtca caaactacta agttaaaatc
240
cttaacttct gggaatgttt tttaaaagga ggtgaaaatt ggttacaact ttacttttct
300
taccttgtta agatactcat aagcctctac atcatttcca ctgtgatagt ttcggatccc
360
ttgaagtaag tagagtctta gaaacagtac cttctctttc ccacaatttc cttttatgtg
420
gaccagtctc tgatgatttt ctccgtaaca attttttaaag catttctggg ccaagtttaa
480
ttttttttct gcatcatcaa ggcattccag ctgttccagg cggaagtaac accacactat
540
atccagctgg aggacggcat agttatccac tgtgtccagc agctctctgc aacactcaca
600
gaaatatttg tcagcgtcca acagacatgg caaggctatt ccatattctt ttctttttcag
660
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gaaagctctg cccttctcat gatatcccat agctaacata agggctttc tttctgatgg
720
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780
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840
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900
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960
gccttgttct tcaagggttt tccctagttg tagttgcttc ttatttatga caattttgat
1020
ataattttct tgaagtccaa aggtttcagc tattttggac ctcagttctc tgccagtgat
1080
gtgcaatcgg gtctccaaca agttttttcct atctttttttt agtcttggtg gtaaaaacac
1140
ctcgattgta gcaattcccg ttgttctata attgtcattt cctgttccac gctcaattgc
1200
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1260
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1320
aattcccgtt gttctataat tgtcatttcc tgttccacgc tcaattgcct tgcaacgtat
1380
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1440
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1500
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1560
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1680
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1740
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1800
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1860
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1920
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1980
atcaaaattg tcataaataa gaagcaacta caactaggga aaacccttga agaacaaggc
2040
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2100
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2160
cagaggacca agagaggact agaaatactg gcaaagagag cagcagagac agtggtggat
2220
ccagaaatga caccgtactt agacatagct aaccagacag gcagatcaat cagaattccc
2280
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ccatcagaaa gaaaagccct tatgttagct atgggatatc atgagaaggg cagagctttc
2340
ctgaaaagaa aagaatatgg aatagccttg ccatgtctgt tggacgctga caaatatttc
2400
tgtgagtgtt gcagagagct gctggacaca gtggataact atgccgtcct ccagctggat
2460
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2520
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2580
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2640
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2700
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2820
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2940
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cctgaaaccg acaaccgtca agaaagtcct tcccaggaaa acattgaccg attggtgtac
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atgggttttg atgcactcgt ggccgaagct gcgctgagag tgttcagagg caacgtccag
3120
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3180
ccagaagact ctttgtcccc gccagccacg tccccttctg actccgcagg aacctctagt
3240
gcctcaacag acgaagacat ggagacagag gccgtcaatg agatactgga agacattcca
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3360
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3420
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3480
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3660
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3780
tccatctgcc cagcttgcct gcctcctgca cccactgccc tgaccttcct gcttcccacg
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3900
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tcgtcctta agtcttcctt ccaagtgctg tggggcataa cgatgaggcg ctggccttgg
3960
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4020
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4080
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4200
gacctatcag agatttagat atattttctc caggtttttt gtgggttttc tttgttgttg
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4320
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4380
gagttccttc cagccccagg accgcagcag cagccaggtg ccgagtggat tgagtgccag
4440
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4500
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4560
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4668

<210> 6076
<211> 601
<212> PRT
<213> Homo sapiens

<400> 6076
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Glu Asp Arg Ile Gln Leu Trp Lys Pro Pro Tyr Thr Glu Glu Asn Lys
            20   25   30
Glu Val Gly Leu Ala Leu Lys Asp Leu Ala Lys Gln Tyr Ser Asp Arg
        35   40   45
Leu Glu Cys Cys Glu Asn Glu Val Glu Lys Val Ile Glu Glu Ile Arg
    50   55   60
Cys Lys Ala Ile Glu Arg Gly Thr Gly Asn Asp Asn Tyr Arg Thr Thr
65   70   75   80
Gly Ile Ala Thr Ile Glu Val Phe Leu Pro Pro Arg Leu Lys Lys Asp
                85   90   95
Arg Lys Asn Leu Leu Glu Thr Arg Leu His Ile Thr Gly Arg Glu Leu
            100   105   110
Arg Ser Lys Ile Ala Glu Thr Phe Gly Leu Gln Glu Asn Tyr Ile Lys
        115   120   125
Ile Val Ile Asn Lys Lys Gln Leu Gln Leu Gly Lys Thr Leu Glu Glu
        130   135   140
Gln Gly Val Ala His Asn Val Lys Ala Met Val Leu Glu Leu Lys Gln
145   150   155   160
Ser Glu Glu Asp Ala Arg Lys Asn Phe Gln Leu Glu Glu Glu Glu Gln

5258

```
                        165                      170                      175
Asn Glu Ala Lys Leu Lys Glu Lys Gln Ile Gln Arg Thr Lys Arg Gly
            180                      185                      190
Leu Glu Ile Leu Ala Lys Arg Ala Ala Glu Thr Val Val Asp Pro Glu
        195                      200                      205
Met Thr Pro Tyr Leu Asp Ile Ala Asn Gln Thr Gly Arg Ser Ile Arg
    210                      215                      220
Ile Pro Pro Ser Glu Arg Lys Ala Leu Met Leu Ala Met Gly Tyr His
225                      230                      235                      240
Glu Lys Gly Arg Ala Phe Leu Lys Arg Lys Glu Tyr Gly Ile Ala Leu
                245                      250                      255
Pro Cys Leu Leu Asp Ala Asp Lys Tyr Phe Cys Glu Cys Cys Arg Glu
            260                      265                      270
Leu Leu Asp Thr Val Asp Asn Tyr Ala Val Leu Gln Leu Asp Ile Val
            275                      280                      285
Trp Cys Tyr Phe Arg Leu Glu Gln Leu Glu Cys Leu Asp Asp Ala Glu
        290                      295                      300
Lys Lys Leu Asn Leu Ala Gln Lys Cys Phe Lys Asn Cys Tyr Gly Glu
305                      310                      315                      320
Asn His Gln Arg Leu Val His Ile Lys Gly Asn Cys Gly Lys Glu Lys
                325                      330                      335
Val Leu Phe Leu Arg Leu Tyr Leu Leu Gln Gly Ile Arg Asn Tyr His
            340                      345                      350
Ser Gly Asn Asp Val Glu Ala Tyr Glu Tyr Leu Asn Arg His Val Ser
        355                      360                      365
Ser Leu Lys Ser Tyr Ile Leu Ile His Gln Lys Trp Thr Ile Cys Cys
    370                      375                      380
Ser Trp Gly Leu Leu Pro Arg Lys Xaa Arg Leu Gly Leu Arg Ala Cys
385                      390                      395                      400
Asp Gly Asn Val Asp His Ala Ala Thr His Ile Thr Asn Arg Arg Glu
            405                      410                      415
Glu Leu Ala Gln Ile Arg Lys Glu Glu Lys Glu Lys Lys Arg Arg Arg
        420                      425                      430
Leu Glu Asn Ile Arg Phe Leu Lys Gly Met Gly Tyr Ser Thr His Ala
        435                      440                      445
Ala Gln Gln Ile Leu Leu Ser Asn Pro Gln Met Trp Trp Leu Asn Asp
    450                      455                      460
Ser Asn Pro Glu Thr Asp Asn Arg Gln Glu Ser Pro Ser Gln Glu Asn
465                      470                      475                      480
Ile Asp Arg Leu Val Tyr Met Gly Phe Asp Ala Leu Val Ala Glu Ala
            485                      490                      495
Ala Leu Arg Val Phe Arg Gly Asn Val Gln Leu Ala Ala Gln Thr Leu
        500                      505                      510
Ala His Asn Gly Gly Ser Leu Pro Pro Glu Leu Pro Leu Ser Pro Glu
        515                      520                      525
Asp Ser Leu Ser Pro Pro Ala Thr Ser Pro Ser Asp Ser Ala Gly Thr
        530                      535                      540
Ser Ser Ala Ser Thr Asp Glu Asp Met Glu Thr Glu Ala Val Asn Glu
545                      550                      555                      560
Ile Leu Glu Asp Ile Pro Glu His Glu Glu Asp Tyr Leu Asp Ser Thr
            565                      570                      575
Leu Glu Asp Glu Glu Ile Ile Ile Ala Glu Tyr Leu Ser Tyr Val Glu
        580                      585                      590
Asn Arg Lys Ser Ala Thr Lys Lys Asn
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              595                    600

<210> 6077
<211> 2093
<212> DNA
<213> Homo sapiens

<400> 6077
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120
ccggggggttg ggccgcacat ttacgtgcgc gaagcggagg accgggagct ggtgacgatg
180
gcggggccgc agcccctggc gctgcaactg gaacagttgt tgaacccgcg accaagcgag
240
gcggaccctg aagcggaccc cgaggaagcc actgctgcca gggtgattga caggtttgat
300
gaaggggaag atggggaagg tgatttccta gtagtgggta gcattagaaa actggcatca
360
gcctccctct tggacacgga caaaaggtat tgcggcaaaa ccacctctag aaaagcatgg
420
aatgaagacc attgggagca gactctgcca ggatcgtctg atgaggaaat atctgatgag
480
gaagggtctg gagatgaaga ttcagaggga ctgggtctgg aggaatatga tgaggacgac
540
ctgggtgctg ctgaggaaca ggagtgtggt gatcagggag agcaagaaga cgagaagcca
600
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660
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720
ggggatgacg cggaagactc ccaaggcgag agtgaggaag acagggctgg agatagaaac
780
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840
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900
aaactacaaa aagctctgtt gaccaccaac cagcttcctc aaccagatgt tttcccattg
960
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1020
aaagcattgt tgaggtcatt ggtaggtctt caggaagagt tgcttttcca gtacccagac
1080
actagatatc tagtagatgg gacaaagccc aatgcgggaa gtgaggagat ttctagtgaa
1140
gatgatgagc tggtagaaga gaagaagcag caacgaagaa gggtccctgc aaagaggaag
1200
ctggagatgg aggactatcc cagcttcatg gcaaagcgct ttgccgactt tacagtctac
1260
aggaaccgca cacttcagaa atggcacgat aagaccaaac tggcttctgg aaaactgggg
1320
aagggttttg gtgcctttga acgctcaatc ttgactcaga tcgaccatat tctgatggac
1380
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aaagagagat tacttcgaag gacacagacc aagcgctctg tctatcgagt tcttggcaaa
1440
cctgagccag cagctcagcc tgtcccagag agtttgccag gggaaccgga gatccttcct
1500
caagcccctg ctaatgctca tctgaaggac ttggatgaag aaatctttga tgatgatgac
1560
ttttaccacc agctccttcg agaactcata gaacggaaga ccagctcctt ggatcccaac
1620
gatcaggtgg ccatgggaag gcagtggctt gcaatccaga agttacgaag caaaatccac
1680
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1740
ctactgagtt tcatggcacc tattgaccat actacaatga atgatgatgc caggacagaa
1800
ctgtaccgct ctcttttttgg ccagctccac cctcccgacg aaggccacgg ggattgacat
1860
cgcccacctc cgacacccag tgggcgcctt ggctggtgcg gctgctggtc cagatggagg
1920
aaaccagtga ctttatgggg ctgagctagt agggaagccc ctggaaagat gctgcgttcc
1980
gaacctgtgc ctaatacacg caagggcgct gtcccgccca accccgcctt taaacgccac
2040
aaataaagag cattgttacc gccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
2093
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<210> 6078
<211> 213
<212> PRT
<213> Homo sapiens

<400> 6078

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Arg Pro Gly Arg Ser Pro Gly Ser Gly Arg Ser Arg Ala Val Gly Cys
1                5                  10                     15
Leu Arg Ala Val Ser Gly Gly Ser Gly Asn Arg Ile Lys Ala Arg Gly
              20                  25                  30
Ser Gly Arg Glu Gly Ala Ser Gly Pro Gly Val Gly Pro His Ile Tyr
              35                  40                  45
Val Arg Glu Ala Glu Asp Arg Glu Leu Val Thr Met Ala Gly Pro Gln
          50              55              60
Pro Leu Ala Leu Gln Leu Glu Gln Leu Leu Asn Pro Arg Pro Ser Glu
65                  70                  75                      80
Ala Asp Pro Glu Ala Asp Pro Glu Glu Ala Thr Ala Ala Arg Val Ile
              85                  90                  95
Asp Arg Phe Asp Glu Gly Glu Asp Gly Glu Gly Asp Phe Leu Val Val
              100                 105                 110
Gly Ser Ile Arg Lys Leu Ala Ser Ala Ser Leu Leu Asp Thr Asp Lys
          115                 120                 125
Arg Tyr Cys Gly Lys Thr Thr Ser Arg Lys Ala Trp Asn Glu Asp His
          130                 135                 140
Trp Glu Gln Thr Leu Pro Gly Ser Ser Asp Glu Glu Ile Ser Asp Glu
145                 150                 155                     160
Glu Gly Ser Gly Asp Glu Asp Ser Glu Gly Leu Gly Leu Glu Glu Tyr
              165                 170                 175
Asp Glu Asp Asp Leu Gly Ala Ala Glu Glu Gln Glu Cys Gly Asp Gln
```

```
                180                   185                   190
Gly Glu Gln Glu Asp Glu Lys Pro Leu Cys Lys Asn Thr Gly Leu Gln
            195                   200                   205
Cys Pro Glu Tyr Gln
        210
```

<210> 6079
<211> 651
<212> DNA
<213> Homo sapiens

<400> 6079

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ggccagtcct ccgcctcgct ccgtcagttt ccccctgctg aactactggg tgcggagcgg
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gtgcgtgcgc agcctgcgca tgtgcatagg ggtcgactgc cgctgcggtg catgaggcgg
120
catgcgcagc ggggccgtgg gtgtacgcgg cgcagcgcgg cagtcctgat ggcccggcat
180
gggttaccgc tgctgccccc tgctgtcgctc ctggtcggcg cgtggctcaa gctaggaaat
240
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300
ccagacagca gagatggtga agggcctgtg cgggaggcga cagtgaaacc ctttgccatc
360
gacatatttc ctgtcaccaa caaagatttc agggattttg tcaggagaa aaagtatcgg
420
acagaagctg agatgtttgg atggagcttt gtctttgagg actttgtctc tgatgagctg
480
agaaacaaag ccacccagcc aatgaagtct gtactctggt ggcttccagt ggaaaaggca
540
ttttggaggc agcctgcagg tcctggctct ggcatccgag agagactgga gcacccagtg
600
ttacacgtga gctggaatga cgcccgtgcc tactgtgctt ggcggggaaa a
651
```

<210> 6080
<211> 162
<212> PRT
<213> Homo sapiens

<400> 6080

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Leu Met Ala Arg His Gly Leu Pro Leu Leu Pro Leu Leu Ser Leu Leu
1               5                   10                  15
Val Gly Ala Trp Leu Lys Leu Gly Asn Gly Gln Ala Thr Ser Met Val
            20                  25                  30
Gln Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser
        35                  40                  45
Arg Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala
    50                  55                  60
Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
65                  70                  75                  80
Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
                85                  90                  95
Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro
```

```
               100               105               110
    Met Lys Ser Val Leu Trp Trp Leu Pro Val Glu Lys Ala Phe Trp Arg
          115               120               125
    Gln Pro Ala Gly Pro Gly Ser Gly Ile Arg Glu Arg Leu Glu His Pro
      130               135               140
    Val Leu His Val Ser Trp Asn Asp Ala Arg Ala Tyr Cys Ala Trp Arg
    145               150               155               160
    Gly Lys
```

<210> 6081
<211> 655
<212> DNA
<213> Homo sapiens

<400> 6081

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gataatgatc aggaacctcc ctattcaatg ataacattac acgaaatggc agaaacagat
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gaaggatggt tggatgttgt ccagtcttta attagagtta ttccactgga agatccactg
120
ggaccagctg ttataacatt gttactagat gaatgtccat tgcccactaa agatgcactc
180
cagaaattga ctgaaattct caatttaaat ggagaagtag cttgccagga ctcaagccat
240
cctgccaaac acaggaacac atctgcagtc ctaggctgct tggccgagaa actagcaggt
300
cctgcaagta taggtttact tagcccagga atactggaat acttgctaca gtgtctgaag
360
ttacagtccc accccacagt catgcttttt gcacttatcg cactggaaaa gtttgcacag
420
acaagtgaaa ataaattgac tatttctgaa tccagtatta gtgaccggct tgtcacattg
480
gagtcctggg ctaatgatcc tgattatctg aaacgtcaag ttggtttctg tgcccagtgg
540
agcttagaca atctcttttt aaaagaaggt agacagctga cctatgagaa agtgaacttg
600
agtagcatta gggccatgct gaatagcaat gatgtcagcg agtacctgaa gatct
655
```

<210> 6082
<211> 218
<212> PRT
<213> Homo sapiens

<400> 6082

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Asp Asn Asp Gln Glu Pro Pro Tyr Ser Met Ile Thr Leu His Glu Met
1                   5                  10                  15
Ala Glu Thr Asp Glu Gly Trp Leu Asp Val Val Gln Ser Leu Ile Arg
              20                  25                  30
Val Ile Pro Leu Glu Asp Pro Leu Gly Pro Ala Val Ile Thr Leu Leu
          35                  40                  45
Leu Asp Glu Cys Pro Leu Pro Thr Lys Asp Ala Leu Gln Lys Leu Thr
      50                  55                  60
Glu Ile Leu Asn Leu Asn Gly Glu Val Ala Cys Gln Asp Ser Ser His
```

```
      65                      70                      75                      80
      Pro Ala Lys His Arg Asn Thr Ser Ala Val Leu Gly Cys Leu Ala Glu
                          85                      90                      95
      Lys Leu Ala Gly Pro Ala Ser Ile Gly Leu Leu Ser Pro Gly Ile Leu
                          100                     105                     110
      Glu Tyr Leu Leu Gln Cys Leu Lys Leu Gln Ser His Pro Thr Val Met
                  115                     120                     125
      Leu Phe Ala Leu Ile Ala Leu Glu Lys Phe Ala Gln Thr Ser Glu Asn
              130                     135                     140
      Lys Leu Thr Ile Ser Glu Ser Ser Ile Ser Asp Arg Leu Val Thr Leu
      145                     150                     155                     160
      Glu Ser Trp Ala Asn Asp Pro Asp Tyr Leu Lys Arg Gln Val Gly Phe
                          165                     170                     175
      Cys Ala Gln Trp Ser Leu Asp Asn Leu Phe Leu Lys Glu Gly Arg Gln
                          180                     185                     190
      Leu Thr Tyr Glu Lys Val Asn Leu Ser Ser Ile Arg Ala Met Leu Asn
              195                     200                     205
      Ser Asn Asp Val Ser Glu Tyr Leu Lys Ile
          210                     215
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<210> 6083
<211> 358
<212> DNA
<213> Homo sapiens

<400> 6083

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nnacgcgtga ggggacaggc tgagaaaaaa gaattacgac ataaaataga tgaaatggaa
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gaaaaagaac aggagctcca ggcaaaaata gaagctttgc aagctgataa tgatttcacc
120
aatgaaaggc taacagcttt acaagagaag ctgatcgtcg aagggcatct aaccaaagcg
180
gtagaagaaa caaagctttc aaaagaaaat cagacaagag caaaagaatc tgatttttca
240
gatactctga gtccaagcaa ggaaaaaagc agtgacgaca ctacagacgc ccaaatggat
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gagcaagacc taaatgagcc tcttgccaaa gtgtcccttt taaaagatga cttgcagg
358
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<210> 6084
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6084

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Met Glu Glu Lys Glu Gln Glu Leu Gln Ala Lys Ile Glu Ala Leu Gln
1               5                       10                      15
Ala Asp Asn Asp Phe Thr Asn Glu Arg Leu Thr Ala Leu Gln Glu Lys
              20                      25                      30
Leu Ile Val Glu Gly His Leu Thr Lys Ala Val Glu Glu Thr Lys Leu
          35          ·           40                      45
Ser Lys Glu Asn Gln Thr Arg Ala Lys Glu Ser Asp Phe Ser Asp Thr
      50                      55                      60
Leu Ser Pro Ser Lys Glu Lys Ser Ser Asp Asp Thr Thr Asp Ala Gln
```

5264

```
65                  70              75              80
Met Asp Glu Gln Asp Leu Asn Glu Pro Leu Ala Lys Val Ser Leu Leu
                85                  90              95
Lys Asp Asp Leu Gln
            100
```

<210> 6085
<211> 2307
<212> DNA
<213> Homo sapiens

<400> 6085
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ggttacgaaa cagtggttgg ccctggtgat gttctttaca tcccaatgta ctggtggcat
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cacatagagt cattactaaa tgggggattt accatcactg tgaacttctg gtataagggg
240
gctcccaccc ctaagagaat tgaatatcct ctcaaagctc atcagaaagt ggccataatg
300
agaaacattg agaagatgct tggagaggcc ttggggaacc cacaagaggt ggggcccttg
360
ttgaacacaa tgatcaaggg ccgatacaac tagcctgcca ggggtcaagg cctcctgcca
420
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480
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540
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1140
tatagtttct ctctttcagc accagctctt gcccctatgc tgggtaccaa gggagttctc
1200
ctagctgtgg cttctctagg ttctaggggt gcaagcctct gtgtgtttgt ttgtgtgtgt
1260
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1380
ttaccaaggt tctccactgc ttaccttttc cagtgggaca gtacagtgtg agccccgggg
1440
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1560
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1680
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1800
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1920
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1980
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2040
gcatctgagc tctggctctc acccctgaag ctcagttata gtgcactgat gaactgagag
2100
gatgcgtgtg gatgtgtgtg catgcctgag tgcgtttttt ggggaggggt gtttattttt
2160
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2280
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2307


<210> 6086
<211> 84
<212> PRT
<213> Homo sapiens

<400> 6086
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Arg Gly Ala Ser Leu Cys Val Phe Val Cys Val Cys Leu Cys Val Arg
                20                  25                  30
Ile Thr Leu Gly Val Gln Ala Ser Gly Cys Val Cys Val Cys Ala Cys
        35                  40                  45
Val Cys Val Cys Val Ser Val Cys Val Cys Val Cys Val His Thr Gly
    50                  55                  60
Gln Pro Pro Tyr Leu Pro Arg Phe Ser Thr Ala Tyr Leu Phe Gln Trp
65                  70                  75                  80
Asp Ser Thr Val
```

5266

```
<210> 6087
<211> 1506
<212> DNA
<213> Homo sapiens

<400> 6087
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120
ctcttgtccc aagagaagcg ggcagcggaa acgcactttg ggtttgagac tgtgtcggaa
180
gaggagaagg ggggcaaagt ctatcaggtg tttgaaagtg tggctaagaa gtatgatgtg
240
atgaatgata tgatgagtct cggcatccat cgtgtttgga aggatttgct gctctggaag
300
atgcacccgc tgcccgggac ccagctgctc gacatggctg gaggcacagg tgacattgcg
360
ttccggttcc ttaattatgt tcagtcccag catcagagaa aacagaagag gcagttaagg
420
gcccaacaaa atttatcctg ggaagaaatt gccaaagagt accagaatga agaagattcc
480
ttgggcgggt ctcgtgtcgt ggtgtgtgac atcaacaagg agatgctaaa ggttggaaag
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cagaaagcct tggctcaagg atacagagct ggacttgcat gggtattagg agatgctgaa
600
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720
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1260
aaccacccct aaagctcagt tttgaagtga gtgtatttat agcttctctg ctggtgctgc
1320
cttctagagg gatgatagat catttgaacc caatgacaat ttttaaccag aaaatttaat
1380
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1500
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1506

<210> 6088
<211> 326
<212> PRT
<213> Homo sapiens

<400> 6088
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            20   25   30
Pro Gly Asp Leu Leu Ser Ala Arg Leu Leu Ser Gln Glu Lys Arg Ala
        35   40   45
Ala Glu Thr His Phe Gly Phe Glu Thr Val Ser Glu Glu Glu Lys Gly
    50   55   60
Gly Lys Val Tyr Gln Val Phe Glu Ser Val Ala Lys Lys Tyr Asp Val
65   70   75   80
Met Asn Asp Met Met Ser Leu Gly Ile His Arg Val Trp Lys Asp Leu
                85   90   95
Leu Leu Trp Lys Met His Pro Leu Pro Gly Thr Gln Leu Leu Asp Met
            100   105   110
Ala Gly Gly Thr Gly Asp Ile Ala Phe Arg Phe Leu Asn Tyr Val Gln
        115   120   125
Ser Gln His Gln Arg Lys Gln Lys Arg Gln Leu Arg Ala Gln Gln Asn
    130   135   140
Leu Ser Trp Glu Glu Ile Ala Lys Glu Tyr Gln Asn Glu Glu Asp Ser
145   150   155   160
Leu Gly Gly Ser Arg Val Val Val Cys Asp Ile Asn Lys Glu Met Leu
                165   170   175
Lys Val Gly Lys Gln Lys Ala Leu Ala Gln Gly Tyr Arg Ala Gly Leu
            180   185   190
Ala Trp Val Leu Gly Asp Ala Glu Glu Leu Pro Phe Asp Asp Asp Lys
            195   200   205
Phe Asp Ile Tyr Thr Ile Ala Phe Gly Ile Arg Asn Val Thr His Ile
    210   215   220
Asp Gln Ala Leu Gln Glu Ala His Arg Val Leu Lys Pro Gly Gly Arg
225   230   235   240
Phe Leu Cys Leu Glu Phe Ser Gln Val Asn Asn Pro Leu Ile Ser Arg
                245   250   255
Leu Tyr Asp Leu Tyr Ser Phe Gln Val Ile Pro Val Leu Gly Glu Val
            260   265   270
Ile Ala Gly Asp Trp Lys Ser Tyr Gln Tyr Leu Val Glu Ser Ile Arg
        275   280   285
Arg Phe Pro Ser Gln Glu Glu Phe Lys Asp Met Ile Glu Asp Ala Gly
    290   295   300
Phe His Lys Val Thr Tyr Glu Ser Leu Thr Ser Gly Ile Val Ala Ile
305   310   315   320
His Ser Gly Phe Lys Leu

325

<210> 6089
<211> 4211
<212> DNA
<213> Homo sapiens

<400> 6089
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180
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360
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480
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1380

5269

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2160
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2280
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3000
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5270

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```
<210> 6090
<211> 839
<212> PRT
<213> Homo sapiens
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<400> 6090
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           20                  25                  30
Glu Asp Cys Thr Trp Met Gln Glu Tyr Asn Pro Pro Thr Phe Glu Thr
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```
          35                    40                    45
Phe Tyr Gln Arg Phe Arg His Phe Gln Tyr His Glu Ala Ser Gly Pro
    50                    55                    60
Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp Leu Arg
65                    70                    75                    80
Pro Glu Leu His Thr Lys Glu Gln Ile Leu Glu Leu Leu Val Leu Glu
            85                    90                    95
Gln Phe Leu Thr Ile Leu Pro Glu Glu Phe Gln Pro Trp Val Arg Glu
            100                   105                   110
His His Pro Glu Ser Gly Glu Glu Ala Val Ala Val Ile Glu Asn Ile
        115                   120                   125
Gln Arg Glu Leu Glu Glu Arg Arg Gln Gln Ile Val Ala Cys Pro Asp
    130                   135                   140
Val Leu Pro Arg Lys Met Ala Thr Pro Gly Ala Val Gln Glu Ser Cys
145                   150                   155                   160
Ser Pro His Pro Leu Thr Val Asp Thr Gln Pro Glu Gln Ala Pro Gln
            165                   170                   175
Lys Pro Arg Leu Leu Glu Glu Asn Ala Leu Pro Val Leu Gln Val Pro
            180                   185                   190
Ser Leu Pro Leu Lys Asp Ser Gln Glu Leu Thr Ala Ser Leu Leu Ser
        195                   200                   205
Thr Gly Ser Gln Lys Leu Val Lys Ile Glu Glu Val Ala Asp Val Ala
    210                   215                   220
Val Ser Phe Ile Leu Glu Glu Trp Gly His Leu Asp Gln Ser Gln Lys
225                   230                   235                   240
Ser Leu Tyr Arg Asp Asp Arg Lys Glu Asn Tyr Gly Ser Ile Thr Ser
            245                   250                   255
Met Gly Tyr Glu Ser Arg Asp Asn Met Glu Leu Ile Val Lys Gln Ile
            260                   265                   270
Ser Asp Asp Ser Glu Ser His Trp Val Ala Pro Glu His Thr Glu Arg
        275                   280                   285
Ser Val Pro Gln Asp Pro Asp Phe Ala Glu Val Ser Asp Leu Lys Gly
    290                   295                   300
Met Val Gln Arg Trp Gln Val Asn Pro Thr Val Gly Lys Ser Arg Gln
305                   310                   315                   320
Asn Pro Ser Gln Lys Arg Asp Leu Asp Ala Ile Thr Asp Ile Ser Pro
            325                   330                   335
Lys Gln Ser Thr His Gly Glu Arg Gly His Arg Cys Ser Asp Cys Gly
            340                   345                   350
Lys Phe Phe Leu Gln Ala Ser Asn Phe Ile Gln His Arg Arg Ile His
        355                   360                   365
Thr Gly Glu Lys Pro Phe Lys Cys Gly Glu Cys Gly Lys Ser Tyr Asn
    370                   375                   380
Gln Arg Val His Leu Thr Gln His Gln Arg Val His Thr Gly Glu Lys
385                   390                   395                   400
Pro Tyr Lys Cys Gln Val Cys Gly Lys Ala Phe Arg Val Ser Ser His
            405                   410                   415
Leu Val Gln His His Ser Val His Ser Gly Glu Arg Pro Tyr Gly Cys
            420                   425                   430
Asn Glu Cys Gly Lys Asn Phe Gly Arg His Ser His Leu Ile Glu His
        435                   440                   445
Leu Lys Arg His Phe Arg Glu Lys Ser Gln Arg Cys Ser Asp Lys Arg
    450                   455                   460
Ser Lys Asn Thr Lys Leu Ser Val Lys Lys Lys Ile Ser Glu Tyr Ser
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465                     470                     475                     480
Glu Ala Asp Met Glu Leu Ser Gly Lys Thr Gln Arg Asn Val Ser Gln
                485                     490                     495
Val Gln Asp Phe Gly Glu Gly Cys Glu Phe Gln Gly Lys Leu Asp Arg
            500                     505                     510
Lys Gln Gly Ile Pro Met Lys Glu Ile Leu Gly Gln Pro Ser Ser Lys
        515                     520                     525
Arg Met Asn Tyr Ser Glu Val Pro Tyr Val His Lys Lys Ser Ser Thr
        530                     535                     540
Gly Glu Arg Pro His Lys Cys Asn Glu Cys Gly Lys Ser Phe Ile Gln
545                     550                     555                     560
Ser Ala His Leu Ile Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
                565                     570                     575
Phe Arg Cys Glu Glu Cys Gly Lys Ser Tyr Asn Gln Arg Val His Leu
            580                     585                     590
Thr Gln His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Thr Cys Pro
        595                     600                     605
Leu Cys Gly Lys Ala Phe Arg Val Arg Ser His Leu Val Gln His Gln
    610                     615                     620
Ser Val His Ser Gly Glu Arg Pro Phe Lys Cys Asn Glu Cys Gly Lys
625                     630                     635                     640
Gly Phe Gly Arg Arg Ser His Leu Ala Gly His Leu Arg Leu His Ser
            645                     650                     655
Arg Glu Lys Ser His Gln Cys Arg Glu Cys Gly Glu Ile Phe Phe Gln
            660                     665                     670
Tyr Val Ser Leu Ile Glu His Gln Val Leu His Met Gly Gln Lys Asn
        675                     680                     685
Glu Lys Asn Gly Ile Cys Glu Glu Ala Tyr Ser Trp Asn Leu Thr Val
        690                     695                     700
Ile Glu Asp Lys Lys Ile Glu Leu Gln Glu Gln Pro Tyr Gln Cys Asp
705                     710                     715                     720
Ile Cys Gly Lys Ala Phe Gly Tyr Ser Ser Asp Leu Ile Gln His Tyr
            725                     730                     735
Arg Thr His Thr Ala Glu Lys Pro Tyr Gln Cys Asp Ile Cys Arg Glu
            740                     745                     750
Asn Val Gly Gln Cys Ser His Thr Lys Gln His Gln Lys Ile Tyr Ser
        755                     760                     765
Ser Thr Lys Ser His Gln Cys His Glu Cys Gly Arg Gly Phe Thr Leu
        770                     775                     780
Lys Ser His Leu Asn Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
785                     790                     795                     800
Phe Gln Cys Lys Glu Cys Gly Met Asn Phe Ser Trp Ser Cys Ser Leu
            805                     810                     815
Phe Lys His Leu Arg Ser His Glu Arg Thr Asp Pro Ile Asn Thr Leu
        820                     825                     830
Ser Val Glu Gly Ser Leu Leu
        835
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<210> 6091
<211> 1336
<212> DNA
<213> Homo sapiens

<400> 6091
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240
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300
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480
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1200
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1336

<210> 6092
<211> 118
<212> PRT
<213> Homo sapiens

<400> 6092
Met Ala Gln Ser Trp Ala Arg Thr Gln Glu Phe Leu Cys Pro Met Cys

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Pro Thr Thr Trp His Ser Arg Gly Gln Gly Arg Ser Pro Ala Ser Gln
              20                   25                   30
Thr Pro Asn Trp Tyr Trp Val Leu Gly His Pro Asn Leu Ile Arg Asp
          35                   40                   45
Val Thr Arg Gln Val Pro Ser Pro Pro Ser Gly Phe Arg Leu Pro Ser
      50                   55                   60
Ser Arg His Glu Gly Pro Ser Pro Pro Arg Asp Leu Gly Thr Ser Gly
65                   70                   75                   80
Pro Ser Arg Ala Ala Ser His Lys Pro Ser Asn Glu Gln Arg Asp Ala
              85                   90                   95
Gly Gln Gln Leu Gln Leu His Leu Leu Pro Ala Leu Lys Gly Ser Phe
              100        ·            105                 110
Pro Ala Ser Val Leu Ser
          115
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<210> 6093
<211> 1998
<212> DNA
<213> Homo sapiens

<400> 6093
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caagcacgga atgccacctt cctcaagcac gcaagctagg caggccctgc acgttctcac
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720
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960

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1140
cggattccaa catacccta tcagcatttg aagaaatgac tgggatactg gacctgtttc
1200
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1260
tggggattct cttctgaagg ctgacatgat cattacaagt aagttttct aatgtggaca
1320
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1380
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1860
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1980
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1998
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<210> 6094
<211> 136
<212> PRT
<213> Homo sapiens
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<400> 6094
Met Ile Met Ser Ala Phe Arg Arg Glu Ser Pro Pro Thr Ser Val Pro
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Pro Gln Met Gly Ile Tyr Leu Asp Leu Cys Gly Ser Phe Ser Ala Glu
            20                  25                  30
Thr Gly Pro Val Ser Gln Ser Phe Leu Gln Met Leu Ile Gly Val Cys
        35                  40                  45
Trp Asn Pro Lys Pro Leu Pro Arg Leu Gln Ala Pro Asp Gly Leu Leu
    50                  55                  60
Ser Cys Asn Phe Leu Gly Glu Glu Thr Phe Ser Ser Phe Pro Phe Leu
65                  70                  75                  80
Val His Pro Cys Thr Leu Val Leu Ser Gln Pro Leu Pro His Ile Val
```

```
                   85                    90                    95
Pro Asp Ser Arg Gly Thr Ser Ser Leu His Arg Ala Ala Ala Ala Gly
            100                   105                   110
Leu Arg Ala Glu Pro Val Gly Ala Glu Ala Leu Ala Pro Glu Val Gln
        115                   120                   125
Pro Leu Ser Leu Gly Pro Leu Gly
    130              135
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<210> 6095
<211> 441
<212> DNA
<213> Homo sapiens

<400> 6095
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120
ttctccctca agaagtggaa cgcggtggcc atgtggagct gggacgtgga gtgcgatacg
180
tgcgccatct gcagggtcca ggtgatggtg gtctggggag aatgtaatca ttccttccac
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300
tgggtggtcc aaagaatcgg caaatgagag tggttagaag gcttcttagc gcagttgttc
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420
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441

<210> 6096
<211> 97
<212> PRT
<213> Homo sapiens

<400> 6096
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Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
1   5   10   15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
            20   25   30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
        35   40   45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Val Val Trp Gly Glu Cys
    50   55   60
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
65   70   75   80
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
            85   90   95
Lys
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<210> 6097
<211> 2404

<212> DNA
<213> Homo sapiens

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120
ctgctgaaga accagtggtt tgtccgctgc caggaaatgg gggcccgagc tgccaaggct
180
gtggagtcgg gggccctgga gctcagtccc tccttccacc agaagaactg gcaacactgg
240
ttttcccata ttggggactg gtgtgtctcc cggcagctgt ggtggggcca tcagattcca
300
gcctacctgg ttntantagg accatgcgca nngggagaag agnngacctg ttgggtggtc
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ggccggtcag gggctgaggc cagagagtta gcagcggaac tgacagggag gcaaggggca
420
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1380
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1500

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1860
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1980
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<210> 6098
<211> 631
<212> PRT
<213> Homo sapiens

<400> 6098
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Leu Phe Arg Gly Leu Gln Asn His Pro Met Val Leu Pro Ile Cys Ser
             20                  25                  30
Arg Ser Gly Asp Val Ile Glu Tyr Leu Leu Lys Asn Gln Trp Phe Val
         35                  40                  45
Arg Cys Gln Glu Met Gly Ala Arg Ala Ala Lys Ala Val Glu Ser Gly
     50                  55                  60
Ala Leu Glu Leu Ser Pro Ser Phe His Gln Lys Asn Trp Gln His Trp
65                  70                  75                  80
Phe Ser His Ile Gly Asp Trp Cys Val Ser Arg Gln Leu Trp Trp Gly
                 85                  90                  95
His Gln Ile Pro Ala Tyr Leu Val Xaa Xaa Gly Pro Cys Ala Xaa Gly
                100                 105                 110
Glu Glu Xaa Thr Cys Trp Val Val Gly Arg Ser Gly Ala Glu Ala Arg
```

```
              115                    120                   125
Glu Leu Ala Ala Glu Leu Thr Gly Arg Gln Gly Ala Glu Pro Thr Leu
         130                   135                   140
Glu Arg Asp Pro Asp Val Leu Asp Thr Trp Phe Ser Ser Ala Leu Phe
145                   150                   155                   160
Pro Phe Ser Ala Leu Gly Trp Pro Gln Glu Thr Pro Asp Leu Ala Arg
                 165                   170                   175
Phe Tyr Pro Leu Ser Leu Leu Glu Thr Gly Ser Asp Leu Leu Leu Phe
             180                   185                   190
Trp Val Gly Arg Met Val Met Leu Gly Thr Gln Leu Thr Gly Gln Leu
         195                   200                   205
Pro Phe Ser Lys Val Leu Leu His Pro Met Val Arg Asp Arg Gln Gly
    210                   215                   220
Arg Lys Met Ser Lys Ser Leu Gly Asn Val Leu Asp Pro Arg Asp Ile
225                   230                   235                   240
Ile Ser Gly Val Glu Met Gln Leu Leu Gln Glu Lys Leu Arg Ser Gly
                 245                   250                   255
Asn Leu Asp Pro Ala Glu Leu Ala Ile Val Ala Ala Ala Gln Lys Lys
             260                   265                   270
Asp Phe Pro His Gly Ile Pro Glu Cys Gly Thr Asp Ala Leu Arg Phe
         275                   280                   285
Thr Leu Cys Ser His Gly Val Gln Ala Gly Asp Leu His Leu Ser Val
    290                   295                   300
Ser Glu Val Gln Ser Cys Arg His Phe Cys Asn Lys Ile Trp Asn Ala
305                   310                   315                   320
Leu Arg Phe Ile Leu Asn Ala Leu Gly Glu Lys Phe Val Pro Gln Pro
                 325                   330                   335
Ala Glu Glu Leu Ser Pro Ser Ser Pro Met Asp Ala Trp Ile Leu Ser
             340                   345                   350
Arg Leu Ala Leu Ala Ala Gln Glu Cys Glu Arg Gly Phe Leu Thr Arg
         355                   360                   365
Glu Leu Ser Leu Val Thr His Ala Leu His His Phe Trp Leu His Asn
    370                   375                   380
Leu Cys Asp Val Tyr Leu Glu Ala Val Lys Pro Val Leu Trp His Ser
385                   390                   395                   400
Pro Arg Pro Leu Gly Pro Pro Gln Val Leu Phe Ser Cys Ala Asp Leu
                 405                   410                   415
Gly Leu Arg Leu Leu Ala Pro Leu Met Pro Phe Leu Ala Glu Glu Leu
             420                   425                   430
Trp Gln Arg Leu Pro Pro Arg Pro Gly Cys Pro Pro Ala Pro Ser Ile
         435                   440                   445
Ser Val Ala Pro Tyr Pro Ser Ala Cys Ser Leu Glu His Trp Arg Gln
    450                   455                   460
Pro Glu Leu Glu Arg Arg Phe Ser Arg Val Gln Glu Val Val Gln Val
465                   470                   475                   480
Leu Arg Ala Leu Arg Ala Thr Tyr Gln Leu Thr Lys Ala Arg Pro Arg
                 485                   490                   495
Val Leu Leu Gln Ser Ser Glu Pro Gly Asp Gln Gly Leu Phe Glu Ala
             500                   505                   510
Phe Leu Glu Pro Leu Gly Thr Leu Gly Tyr Cys Gly Ala Val Gly Leu
         515                   520                   525
Leu Pro Pro Gly Thr Ala Ala Pro Ser Gly Trp Ala Gln Ala Pro Leu
    530                   535                   540
Ser Asp Thr Ala Gln Val Tyr Met Glu Leu Gln Gly Leu Val Asp Pro
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      545                      550                      555                      560
      Gln Ile Gln Leu Pro Leu Leu Ala Ala Arg Arg Tyr Lys Leu Gln Lys
                           565                      570                      575
      Gln Leu Asp Ser Leu Thr Ala Arg Thr Pro Ser Glu Gly Glu Ala Gly
                       580                      585                      590
      Thr Gln Arg Gln Gln Lys Leu Ser Ser Leu Gln Leu Glu Leu Ser Lys
               595                      600                      605
      Leu Asp Lys Ala Ala Ser His Leu Arg Gln Leu Met Asp Glu Pro Pro
           610                      615                      620
      Ala Pro Gly Ser Pro Glu Leu
      625                      630
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<210> 6099
<211> 3957
<212> DNA
<213> Homo sapiens
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180
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240
aaggttgcta tcaagatcat agataagacc cagctggatg aagaaaactt gaagaagatt
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1080
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1140

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1200

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1260

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1860

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1920

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1980

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2040

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2100

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2700
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5282

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3180
cacccagacc tgagtgatgg cagccagcat ttaaactcct cttgctatcc atctacgtgt
3240
attacagaca ttctgctcag ctacaagcac cccgaagtct ccttcagcat ggagcaggca
3300
ggcgtgtaac aagaaacaga gagagagcaa gaggtcccga gtcccctcct agtctttcat
3360
cctgaatttg cacagaggaa agcgggtgcc cggcatggcc atcctgatgt tgctggaggg
3420
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3480
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3540
gtccccagtc tcccctccac ttggtggggt caccaactac tcaccagaag ggggcttacc
3600
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3660
ctgccctacc accaccacgc gctcagcctg atgtgtttac atggtactgt atgtatggga
3720
gagcagactg cacccgccag caacatcaga tgaaagccag tgagcctact aaccgtgcca
3780
tcttgcaaac tacactttaa aaaaaactca ttgctttgta ttgtagtaac caatatgtgc
3840
agtatacgtt gaatgtatat gaacatactt tcctatttct gttctttgaa aatgtcagaa
3900
atattttttt ctttctcatt ttatgttgaa ctaaaaagga ttaaaaaaaa aatctcc
3957

<210> 6100
<211> 1102
<212> PRT
<213> Homo sapiens

<400> 6100
Gly Ala Ala Gly Ala Gly Thr Gly Gly Ala Gly Pro Ala Gly Arg Leu
1   5   10   15
Leu Pro Pro Pro Ala Pro Gly Ser Pro Ala Ala Pro Ala Ala Val Ser
                20   25   30
Pro Ala Ala Gly Gln Pro Arg Pro Pro Ala Pro Ala Ser Arg Gly Pro

5283

```
                35                        40                        45
Met Pro Ala Arg Ile Gly Tyr Tyr Glu Ile Asp Arg Thr Ile Gly Lys
    50                        55                        60
Gly Asn Phe Ala Val Val Lys Arg Ala Thr His Leu Val Thr Lys Ala
65                        70                        75                        80
Lys Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asp Glu Glu Asn
                85                        90                        95
Leu Lys Lys Ile Phe Arg Glu Val Gln Ile Met Lys Met Leu Cys His
            100                       105                       110
Pro His Ile Ile Arg Leu Tyr Gln Val Met Glu Thr Glu Arg Met Ile
        115                       120                       125
Tyr Leu Val Thr Glu Tyr Ala Ser Gly Gly Glu Ile Phe Asp His Leu
    130                       135                       140
Val Ala His Gly Arg Met Ala Glu Lys Glu Ala Arg Arg Lys Phe Lys
145                       150                       155                       160
Gln Ile Val Thr Ala Val Tyr Phe Cys His Cys Arg Asn Ile Val His
                165                       170                       175
Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala Asn Leu Asn Ile
            180                       185                       190
Lys Ile Ala Asp Phe Gly Phe Ser Asn Leu Phe Thr Pro Gly Gln Leu
        195                       200                       205
Leu Lys Thr Trp Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe
    210                       215                       220
Glu Gly Lys Glu Tyr Asp Gly Pro Lys Val Asp Ile Trp Ser Leu Gly
225                       230                       235                       240
Val Val Leu Tyr Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Ser
                245                       250                       255
Thr Leu Gln Asn Leu Arg Ala Arg Val Leu Ser Gly Lys Phe Arg Ile
            260                       265                       270
Pro Phe Phe Met Ser Thr Glu Cys Glu His Leu Ile Arg His Met Leu
        275                       280                       285
Val Leu Asp Pro Asn Lys Arg Leu Ser Met Glu Gln Ile Cys Lys His
    290                       295                       300
Lys Trp Met Lys Leu Gly Asp Ala Asp Pro Asn Phe Asp Arg Leu Ile
305                       310                       315                       320
Ala Glu Cys Gln Gln Leu Lys Glu Glu Arg Gln Val Asp Pro Leu Asn
                325                       330                       335
Glu Asp Val Leu Leu Ala Met Glu Asp Met Gly Leu Asp Lys Glu Gln
            340                       345                       350
Thr Leu Gln Ala Glu Gln Ala Gly Thr Ala Met Asn Ile Ser Val Pro
        355                       360                       365
Gln Val Gln Leu Ile Asn Pro Glu Asn Gln Ile Val Glu Pro Asp Gly
    370                       375                       380
Thr Leu Asn Leu Asp Ser Asp Glu Gly Glu Glu Pro Ser Pro Glu Ala
385                       390                       395                       400
Leu Val Arg Tyr Leu Ser Met Arg Arg His Thr Val Gly Val Ala Asp
                405                       410                       415
Pro Arg Thr Glu Val Met Glu Asp Leu Gln Lys Leu Leu Pro Gly Phe
            420                       425                       430
Pro Gly Val Asn Pro Gln Ala Pro Phe Leu Gln Val Ala Pro Asn Val
        435                       440                       445
Asn Phe Met His Asn Leu Leu Pro Met Gln Asn Leu Gln Pro Thr Gly
    450                       455                       460
Gln Leu Glu Tyr Lys Glu Gln Ser Leu Leu Gln Pro Pro Thr Leu Gln
```

```
        465                    470                    475                    480
Leu Leu Asn Gly Met Gly Pro Leu Gly Arg Arg Ala Ser Asp Gly Gly
                  485                    490                    495
Ala Asn Ile Gln Leu His Ala Gln Gln Leu Leu Lys Arg Pro Arg Gly
            500                    505                    510
Pro Ser Pro Leu Val Thr Met Thr Pro Ala Val Pro Ala Val Thr Pro
            515                    520                    525
Val Asp Glu Glu Ser Ser Asp Gly Glu Pro Asp Gln Glu Ala Val Gln
        530                    535                    540
Ser Ser Thr Tyr Lys Asp Ser Asn Thr Leu His Leu Pro Thr Glu Arg
    545                    550                    555                    560
Phe Ser Pro Val Arg Arg Phe Ser Asp Gly Ala Ala Ser Ile Gln Ala
                565                    570                    575
Phe Lys Ala His Leu Glu Lys Met Gly Asn Asn Ser Ser Ile Lys Gln
            580                    585                    590
Leu Gln Gln Glu Cys Glu Gln Leu Gln Lys Met Tyr Gly Gly Gln Ile
            595                    600                    605
Asp Glu Arg Thr Leu Glu Lys Thr Gln Gln Gln His Met Leu Tyr Gln
        610                    615                    620
Gln Glu Gln His His Gln Ile Leu Gln Gln Gln Ile Gln Asp Ser Ile
    630                    635                    640
Cys Pro Pro Gln Pro Ser Pro Pro Leu Gln Ala Ala Cys Glu Asn Gln
                645                    650                    655
Pro Ala Leu Leu Thr His Gln Leu Gln Arg Leu Arg Ile Gln Pro Ser
            660                    665                    670
Ser Pro Pro Pro Asn His Pro Asn Asn His Leu Phe Arg Gln Pro Ser
            675                    680                    685
Asn Ser Pro Pro Pro Met Ser Ser Ala Met Ile Gln Pro His Gly Ala
        690                    695                    700
Ala Ser Ser Ser Gln Phe Gln Gly Leu Pro Ser Arg Ser Ala Ile Phe
    705                    710                    715                    720
Gln Gln Gln Pro Glu Asn Cys Ser Ser Pro Pro Asn Val Ala Leu Thr
                725                    730                    735
Cys Leu Gly Met Gln Gln Pro Ala Gln Ser Gln Gln Val Thr Ile Gln
            740                    745                    750
Val Gln Glu Pro Val Asp Met Leu Ser Asn Met Pro Gly Thr Ala Ala
            755                    760                    765
Gly Ser Ser Gly Arg Gly Ile Ser Ile Ser Pro Ser Ala Gly Gln Met
            770                    775                    780
Gln Met Gln His Arg Thr Asn Leu Met Ala Thr Leu Ser Tyr Gly His
    785                    790                    795                    800
Arg Pro Leu Ser Lys Gln Leu Ser Ala Asp Ser Ala Glu Ala His Ser
                805                    810                    815
Leu Asn Val Asn Arg Phe Ser Pro Ala Asn Tyr Asp Gln Ala His Leu
            820                    825                    830
His Pro His Leu Phe Ser Asp Gln Ser Arg Gly Ser Pro Ser Ser Tyr
            835                    840                    845
Ser Pro Ser Thr Gly Val Gly Phe Ser Pro Thr Gln Ala Leu Lys Val
            850                    855                    860
Pro Pro Leu Asp Gln Phe Pro Thr Phe Pro Pro Ser Ala His Gln Gln
    865                    870                    875                    880
Pro Pro His Tyr Thr Thr Ser Ala Leu Gln Gln Ala Leu Leu Ser Pro
                885                    890                    895
Thr Pro Pro Asp Tyr Thr Arg His Gln Gln Val Pro His Ile Leu Gln
```

5285

```
              900                 905                910
Gly Leu Leu Ser Pro Arg His Ser Leu Thr Gly His Ser Asp Ile Arg
         915                 920                925
Leu Pro Pro Thr Glu Phe Ala Gln Leu Ile Lys Arg Gln Gln Gln Gln
       930                 935                940
Arg Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Glu Tyr Gln Glu Leu
945                 950                955                960
Phe Arg His Met Asn Gln Gly Asp Ala Gly Ser Leu Ala Pro Ser Leu
                965                 970                975
Gly Gly Gln Ser Met Thr Glu Arg Gln Ala Leu Ser Tyr Gln Asn Ala
            980                 985                990
Asp Ser Tyr His His Thr Ile Gln Asn Ser Asp Asp Ala Tyr Val Gln
          995                 1000                1005
Leu Asp Asn Leu Pro Gly Met Ser Leu Val Ala Gly Lys Ala Leu Ser
     1010                1015                1020
Ser Ala Arg Met Ser Asp Ala Val Leu Ser Gln Ser Ser Leu Met Gly
1025                1030                1035                1040
Ser Gln Gln Phe Gln Asp Gly Glu Asn Glu Glu Cys Gly Ala Ser Leu
                1045                1050                1055
Gly Gly His Glu His Pro Asp Leu Ser Asp Gly Ser Gln His Leu Asn
            1060                1065                1070
Ser Ser Cys Tyr Pro Ser Thr Cys Ile Thr Asp Ile Leu Leu Ser Tyr
          1075                1080                1085
Lys His Pro Glu Val Ser Phe Ser Met Glu Gln Ala Gly Val
     1090                1095                1100
```

```
<210> 6101
<211> 1447
<212> DNA
<213> Homo sapiens

<400> 6101
tttttttttt ttttttttt ttttttttt ttttttttc actgcaacca gtacttatgt
60
ttattactgt acctaataaa cagcccagcg tggtgattcc tattcactta gtagcctccc
120
catctagaaa tatactccgt gatctttctt gatggccaga ctgtgtaaaa ttcatacagt
180
gtttactaca gggatcccca aatattgtta gttgaatgaa caaacacaca tttcaaggag
240
ggcactacag tgagtagatg aacagttttc tgataggaga ttgtacaagt aatgttttca
300
ccagtgtatt ttaggacagc agattcagat taatgcgctg ggactgaatg caaatagtaa
360
aattacaaat ataaagtaaa aatttggaac ctttgccaca gagaggaata ataaattgat
420
ttaataattt gaaagaactg taaggtttag gttttgttct tattttagt gcgactgaga
480
ttggagtctg tttgtagaca tatctgaaaa aagtgaaggg ggagatggaa gatggtaaat
540
gccaaggaaa agatggaagg ataaatcagt gtaataaaaa ggagcacttc tttttcgcca
600
acagaagtaa aggtaaaggt taagtgtctg agttaacgaa tggattgttg acctctgggg
660
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agggtgctcc catcagctca gctttgtgac gacctaagaa tatcccttcc acacctttcc
720
tgatccaatc gttctggctg cataaaacca cctaaatcaa tcaactgtta cacttccctt
780
agtgctagga catattcata taactcccac gtattaaatg aaaatacatc catctaaaaa
840
taaaacaaca agattgctgc tacaccaaga aaggatttta aaaggcctg ttcacaagct
900
aagtgagggc cagaggaaag gtgttcgttt aaactgaaat tcgagctgcg ataacacctc
960
ctaatgcaat caaacgctgt tgcagcacac ttcttaggag atcgggttca acggcaggga
1020
ttgggtaagg tgagaatctg gcttggcggc tccggccccg gccatctggt tcccttgggc
1080
tccggccgcc accatccact cgacggctct cggcccgaac gcttggtcgc accgcctgcc
1140
gaggtcctag atgaatcgct tcaggcctgg aaacgaggaa gccgtctccg gagaccatcg
1200
ccaacgctga cgcccgcggt ctgaggtcgc catgggaaga gcggtaggcc accctgctcc
1260
tctgatcacc ggaggacagg gacacattgt tcagggccat attcaaacac tgcccgcagt
1320
acttgcgtta cgtccctttg tgaaggcagg cccttcgcgg ctccccagat cagtccagcc
1380
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1440
agccgcc
1447


<210> 6102
<211> 123
<212> PRT
<213> Homo sapiens

<400> 6102
Met Ala Leu Asn Asn Val Ser Leu Ser Ser Gly Asp Gln Arg Ser Arg
1               5                   10                  15
Val Ala Tyr Arg Ser Ser His Gly Asp Leu Arg Pro Arg Ala Ser Ala
            20                  25                  30
Leu Ala Met Val Ser Gly Asp Gly Phe Leu Val Ser Arg Pro Glu Ala
            35                  40                  45
Ile His Leu Gly Pro Arg Gln Ala Val Arg Pro Ser Val Arg Ala Glu
    50                  55                  60
Ser Arg Arg Val Asp Gly Gly Gly Arg Ser Pro Arg Glu Pro Asp Gly
65                  70                  75                  80
Arg Gly Arg Ser Arg Gln Ala Arg Phe Ser Pro Tyr Pro Ile Pro Ala
                85                  90                  95
Val Glu Pro Asp Leu Leu Arg Ser Val Leu Gln Gln Arg Leu Ile Ala
                100                 105                 110
Leu Gly Gly Val Ile Ala Ala Arg Ile Ser Val
            115                 120


<210> 6103
<211> 309
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<212> DNA
<213> Homo sapiens

<400> 6103
agatcttctt tttgagttct aggttctctg gaacacactc ctgaatgtgc acagcgccct
60
ctactgcttc ggccaggttg ccacagccac tgatgagaga cagctccagc cacaatggac
120
agaacctatg ccttgatgaa gaagattggg cagtccccag tgagagtcct gaaggagatt
180
gacggcttcg tcctgaaccg cctgcagtac gccgtcatca gtgaggcctg gagactggtg
240
gaggaagaaa tagtatctcc tagcgaccta gacctggtca tgtcagacgg gctgggcatg
300
cggtacgcg
309

<210> 6104
<211> 71
<212> PRT
<213> Homo sapiens

<400> 6104
Glu Thr Ala Pro Ala Thr Met Asp Arg Thr Tyr Ala Leu Met Lys Lys
1   5   10   15
Ile Gly Gln Ser Pro Val Arg Val Leu Lys Glu Ile Asp Gly Phe Val
            20   25   30
Leu Asn Arg Leu Gln Tyr Ala Val Ile Ser Glu Ala Trp Arg Leu Val
        35   40   45
Glu Glu Glu Ile Val Ser Pro Ser Asp Leu Asp Leu Val Met Ser Asp
    50   55   60
Gly Leu Gly Met Arg Tyr Ala
65   70

<210> 6105
<211> 1846
<212> DNA
<213> Homo sapiens

<400> 6105
ncaccagcag cagcaggcag ccttactcca cggggagggc gcctcacagc agccgcggca
60
cagggggcag aaccggggat gcccccaac cctatgaact caacacagcc atcaactgca
120
gggatgaagt ggtgtctccc cttccatctg ctctgcaggg gtccctcagg ctccctatca
180
gcccctccag ctgcctcagt tatctctgca ccccatctt cctcctcccg acatcgcaaa
240
cgtcgcagga cttccagcaa gtcggaggca ggggctaggg gtggaggcca gggttccaag
300
gaaaagggcc gagggagttg gggaggccgc caccaccacc accacccact gcctgcagca
360
ggcttcaaaa agcaacagcg caagttccag tatgggaatt attgcaaata ctatgggtac
420

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cgcaatcctt cctgtgagga tgggcgcctt cgggtgttga agcctgagtg gtttcggggc
480
cgggacgtcc tagatctggg ctgcaatgtg ggccatctga ccctgagcat tgcctgcaag
540
tggggcccgt cccgcatggt gggcctggat atcgattccc ggctcatcca ttctgcccgc
600
caaaacatcc gacactacct ttccgaggag ctgcgtctcc accccagac tttggaaggg
660
gacccggggg cagagggtga ggaagggacc accaccgttc gaaagaggag ctgcttccca
720
gcctcgctga ctgccagccg gggtcccatc gctgcccccc aagtgccctt ggatggagcg
780
gacacatcag tcttccccaa caatgttgtc ttcgtcacgg gtaattatgt gctggatcga
·840
gatgacctgg tggaggccca aacacctgag tatgatgtgg tgctctgcct cagcctcacc
900
aagtgggtgc atctgaactg gggagacgag ggcctgaagc gcatgtttcg ccggatctac
960
cggcacctac gccctggggg catcctggtc ctagagcccc aaccctggtc gtcgtatggc
1020
aagagaaaga ctcttacaga aacgatctac aagaactact accgaatcca attgaagcca
1080
gagcagttca gttcctacct gacatcccca gacgtgggct ctccagcta tgagcttgtg
1140
gccacacccc acaacacctc taaaggcttc cagcgtcctg tgtacctgtt ccacaaggcc
1200
cgatccccca gccactaagt ggcccctaa acagaaagtg tgaagaggct gccctcgctg
1260
ctcataagga cctgggggaa gaggaaagtg tcccaaggtc tttcctttct gactccaaaa
1320
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1380
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1440
tctcccccag cctcccaggc tggatggcat ggactgtttg ctgacctctg ttctcttagg
1500
gcatgggagg tgggaggata tcaaattctc tagcccttc ctcctattct ctagcccttc
1560
tattctccca aggagagaga ttcccatttc tcctcggcca ttgtacctag ctcttgtccc
1620
tagctgcatt tcagtggacc atggatagag ggactgaggg ttagacgggg aagactggca
1680
gggaggcacg caggtactgt gaaaatcctt ccctttgccc tcccccagtg ggagagggg
1740
ttgggttttc aatgtgagaa cagcacaata aacttgatgt ctaggcagt ggcccccaaa
1800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
1846


<210> 6106
<211> 405
<212> PRT
<213> Homo sapiens
```

<400> 6106
Xaa Pro Ala Ala Ala Gly Ser Leu Thr Pro Arg Gly Gly Arg Leu Thr
1   5   10   15
Ala Ala Ala Ala Gln Gly Pro Glu Pro Gly Met Pro Pro Asn Pro Met
            20   25   30
Asn Ser Thr Gln Pro Ser Thr Ala Gly Met Lys Trp Cys Leu Pro Phe
        35   40   45
His Leu Leu Cys Arg Gly Pro Ser Gly Ser Leu Ser Ala Pro Pro Ala
    50   55   60
Ala Ser Val Ile Ser Ala Pro Pro Ser Ser Ser Ser Arg His Arg Lys
65   70   75   80
Arg Arg Arg Thr Ser Ser Lys Ser Glu Ala Gly Ala Arg Gly Gly Gly
                85   90   95
Gln Gly Ser Lys Glu Lys Gly Arg Gly Ser Trp Gly Gly Arg His His
            100   105   110
His His His Pro Leu Pro Ala Ala Gly Phe Lys Lys Gln Gln Arg Lys
    115   120   125
Phe Gln Tyr Gly Asn Tyr Cys Lys Tyr Tyr Gly Tyr Arg Asn Pro Ser
    130   135   140
Cys Glu Asp Gly Arg Leu Arg Val Leu Lys Pro Glu Trp Phe Arg Gly
145   150   155   160
Arg Asp Val Leu Asp Leu Gly Cys Asn Val Gly His Leu Thr Leu Ser
                165   170   175
Ile Ala Cys Lys Trp Gly Pro Ser Arg Met Val Gly Leu Asp Ile Asp
            180   185   190
Ser Arg Leu Ile His Ser Ala Arg Gln Asn Ile Arg His Tyr Leu Ser
    195   200   205
Glu Glu Leu Arg Leu Pro Pro Gln Thr Leu Glu Gly Asp Pro Gly Ala
    210   215   220
Glu Gly Glu Glu Gly Thr Thr Thr Val Arg Lys Arg Ser Cys Phe Pro
225   230   235   240
Ala Ser Leu Thr Ala Ser Arg Gly Pro Ile Ala Ala Pro Gln Val Pro
            245   250   255
Leu Asp Gly Ala Asp Thr Ser Val Phe Pro Asn Asn Val Val Phe Val
            260   265   270
Thr Gly Asn Tyr Val Leu Asp Arg Asp Asp Leu Val Glu Ala Gln Thr
    275   280   285
Pro Glu Tyr Asp Val Val Leu Cys Leu Ser Leu Thr Lys Trp Val His
    290   295   300
Leu Asn Trp Gly Asp Glu Gly Leu Lys Arg Met Phe Arg Arg Ile Tyr
305   310   315   320
Arg His Leu Arg Pro Gly Gly Ile Leu Val Leu Glu Pro Gln Pro Trp
                325   330   335
Ser Ser Tyr Gly Lys Arg Lys Thr Leu Thr Glu Thr Ile Tyr Lys Asn
            340   345   350
Tyr Tyr Arg Ile Gln Leu Lys Pro Glu Gln Phe Ser Ser Tyr Leu Thr
    355   360   365
Ser Pro Asp Val Gly Phe Ser Ser Tyr Glu Leu Val Ala Thr Pro His
    370   375   380
Asn Thr Ser Lys Gly Phe Gln Arg Pro Val Tyr Leu Phe His Lys Ala
385   390   395   400
Arg Ser Pro Ser His
                405

5290

<210> 6107
<211> 896
<212> DNA
<213> Homo sapiens

<400> 6107
nnaaatttga cccgcacagt gatgaggcca gggctgggag ggaggcaggg tctatcctca
60
gatctcaggg gggcctctgg actgctgctg cctgcacctg cttgtctttt gggcaggcct
120
tggatgtcaa ggagatgctc aaggctgggc tcaacaccac ccccagctcc agcctcccca
180
gtggagtctc cccgaccttc acccgcctct tcagccttct catcattacc ctctgatgga
240
tgggggagtt cagttggctc ggggttgcct tggcctgcca ccaggtggtc cacatgcccc
300
aggtggagga cggatgtgtc gcctgctgac acaatagcgc ccaggagctg gttgctaccg
360
ctgtctgcta cgtaggtaga gagccaagct aggaccaagg ctagaatcag caccaccaca
420
cctgccacca ccatcacctc attacccaca ccctcaatga gggtgacatc agtgaccccc
480
ttagccgacc ctactcctca ctggccggga caactggtct tatcacggag gctggggcca
540
ggcagccctt cggttcgggt gggcccagac cccagtccaa cgccgaggga ataggaccat
600
ccaaaagcgg aaccttcgcc tcagaaaaag ggtgcgggac ccctcctcac cgtgcggtca
660
cggtacggac agggtagatc acaggctgag ggacagagca aagacccctg aggccggaca
720
cctggggtcc tgccgggccc ctccccacga gagttccctg tgtctgtgcc aatcgttttc
780
gtctttcttt gccgcagttt cttttcctgt aaatcatggt taatgacatt aaccttctta
840
ccatcagggg ttagttgtgg ttgtgataaa taattactac cgttattaag caattg
896

<210> 6108
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6108
Xaa Asn Leu Thr Arg Thr Val Met Arg Pro Gly Leu Gly Gly Arg Gln
1   5   10   15
Gly Leu Ser Ser Asp Leu Arg Gly Ala Ser Gly Leu Leu Leu Pro Ala
            20   25   30
Pro Ala Cys Leu Leu Gly Arg Pro Trp Met Ser Arg Arg Cys Ser Arg
            35   40   45
Leu Gly Ser Thr Pro Pro Ala Pro Ala Ser Pro Val Glu Ser Pro
        50   55   60
Arg Pro Ser Pro Ala Ser Ser Ala Phe Ser Ser Leu Pro Ser Asp Gly
65   70   75   80
Trp Gly Ser Ser Val Gly Ser Gly Leu Pro Trp Pro Ala Thr Arg Trp

```
                    85                  90                    95
Ser Thr Cys Pro Arg Trp Arg Thr Asp Val Ser Pro Ala Asp Thr Ile
                    100                105                   110
Ala Pro Arg Ser Trp Leu Leu Pro Leu Ser Ala Thr
         115                120
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<210> 6109
<211> 2087
<212> DNA
<213> Homo sapiens

<400> 6109

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aggccggaag cgcgcggaga ccatgtagtg agaccctcgc gaggtctgag agtcactgga
60
gctaccagaa gcatcatggg gccctgggga gagccagagc tcctggtgtg gcgccccgag
120
ggtagcttca gagcctccag tgcctgtggg gctggaggtg aagttggggg ccctggtgct
180
gctgctggtc tcaccctcct ctgcagcctg gtgcccatct gtgtgctgcg ccggccagga
240
gctaaccatg aaggctcagc ttcccgccag aaagccctga gcctagtaag ctgtttcgcg
300
gggggcgtct ttttggccac ttgtctcctg gacctgctgc ctgactacct ggctgccata
360
gatgaggccc tggcagcctt gcacgtgacg ctccagttcc cactgcaaga gttcatcctg
420
gccatgggct tcttcctggt cctggtgatg gagcagatca cactggctta caaggagcag
480
tcagggccgt cacctctgga ggaaacaagg gctctgctgg aacagtgaa  tggtgggccg
540
cagcattggc atgatgggcc aggggtccca caggcgagtg gagccccagc aacccctca
600
gccttgcgtg cctgtgtact ggtgttctcc ctggccctcc actccgtgtt cgaggggctg
660
gcggtagggc tgcagcgaga ccgggctcgg gccatggagc tgtgcctggc tttgctgctc
720
cacaagggca tcctggctgt cagcctgtcc ctgcggctgt tgcagagcca ccttagggca
780
caggtggtgg ctggctgtgg gatcctcttc tcatgcatga cacctctagg catcgggctg
840
ggtgcagctc tggcagagtc ggcaggacct ctgcaccagc tggcccagtc tgtgctagag
900
ggcatggcag ctggcacctt tctctatatc acctttctgg aaatcctgcc ccaggagctg
960
gccagttctg agcaaaggat cctcaaggtc attctgctcc tagcaggctt tgccctgctc
1020
actggcctgc tcttcatcca aatctagggg gcttcaagag aggggcaggg gagattgatg
1080
atcaggtgcc cctgttctcc cttccctccc ccagttgtgg ggaataggaa ggaaagggga
1140
agggaaatac tgaggaccaa aaagttctct gggagctaaa gatagagcct ttggggctat
1200
ctgactaatg agagggaagt gggcagacaa gaggctggcc ccagtcccaa ggaacaagag
1260
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atggtcaagt cgctagagac atatcagggg acattaggat tggggaagac acttgactgc
1320
tagaatcaga ggttggacac tatacataag gacaggctca catgggaggc tggaggtggg
1380
tacccagctg ctgtggaacg ggtatggaga ggtcataaac ctagagtcag tgtcctgttg
1440
gtcctagccc atttcagcac cctgccactt ggagtggacc cctcctactc ttcttagcgc
1500
ctaccctcat acctatctcc ctcctcccat ctcctagggg actggcgcca aatggtctct
1560
ccctgccaat tttggtatct tctctggcct ctccagtcct gcttactcct ctatttttaa
1620
agtgccaaac aaatcccctt cctctttctc aaagcacagt aatgtggcac tgagccctac
1680
ccagcacctc agtgaagggg gcctgcttgc tctttatttt ggtcccggat cctggggtgg
1740
ggcagaaata ttttctgggc tggggtagga ggaaggttgt tgcagccatc tactgctgct
1800
gtaccctagg aatatgggga catggacatg gtgtcccatg cccagatgat aaacactgag
1860
ctgccaaaac attttttttaa atacacccga ggagcccaag ggggaagggc aatgcctacc
1920
cccagcgtta tttttgggga gggagggctg tgcataggga catattcttt agaatctatt
1980
ttattaactg acctgttttg ggacctgtta cccaaataaa agatgtttct agacatctgt
2040
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
2087


<210> 6110
<211> 323
<212> PRT
<213> Homo sapiens

<400> 6110
Met Gly Pro Trp Gly Glu Pro Glu Leu Leu Val Trp Arg Pro Glu Gly
1               5                   10                  15
Ser Phe Arg Ala Ser Ser Ala Cys Gly Ala Gly Gly Glu Val Gly Gly
            20                  25                  30
Pro Gly Ala Ala Ala Gly Leu Thr Leu Leu Cys Ser Leu Val Pro Ile
            35                  40                  45
Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu Gly Ser Ala Ser Arg
        50                  55                  60
Gln Lys Ala Leu Ser Leu Val Ser Cys Phe Ala Gly Gly Val Phe Leu
65                  70                  75                  80
Ala Thr Cys Leu Leu Asp Leu Leu Pro Asp Tyr Leu Ala Ala Ile Asp
                85                  90                  95
Glu Ala Leu Ala Ala Leu His Val Thr Leu Gln Phe Pro Leu Gln Glu
            100                 105                 110
Phe Ile Leu Ala Met Gly Phe Phe Leu Val Leu Val Met Glu Gln Ile
            115                 120                 125
Thr Leu Ala Tyr Lys Glu Gln Ser Gly Pro Ser Pro Leu Glu Glu Thr
        130                 135                 140
Arg Ala Leu Leu Gly Thr Val Asn Gly Gly Pro Gln His Trp His Asp
```

5293

```
145                    150                    155                    160
Gly Pro Gly Val Pro Gln Ala Ser Gly Ala Pro Ala Thr Pro Ser Ala
                165                    170                    175
Leu Arg Ala Cys Val Leu Val Phe Ser Leu Ala Leu His Ser Val Phe
                180                    185                    190
Glu Gly Leu Ala Val Gly Leu Gln Arg Asp Arg Ala Arg Ala Met Glu
            195                    200                    205
Leu Cys Leu Ala Leu Leu Leu His Lys Gly Ile Leu Ala Val Ser Leu
        210                    215                    220
Ser Leu Arg Leu Leu Gln Ser His Leu Arg Ala Gln Val Val Ala Gly
    225                    230                    235                    240
Cys Gly Ile Leu Phe Ser Cys Met Thr Pro Leu Gly Ile Gly Leu Gly
                245                    250                    255
Ala Ala Leu Ala Glu Ser Ala Gly Pro Leu His Gln Leu Ala Gln Ser
                260                    265                    270
Val Leu Glu Gly Met Ala Ala Gly Thr Phe Leu Tyr Ile Thr Phe Leu
            275                    280                    285
Glu Ile Leu Pro Gln Glu Leu Ala Ser Ser Glu Gln Arg Ile Leu Lys
    290                    295                    300
Val Ile Leu Leu Leu Ala Gly Phe Ala Leu Leu Thr Gly Leu Leu Phe
305                    310                    315                    320
Ile Gln Ile
```


<210> 6111
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 6111
```
nnagatctgc ctgcctctct gcccccaaag tggtgggatt acaggtgtga gccactgctc
60
ccagccaaga aattctttat atgtagatac tattttcttg tcaagttcag atgttggaaa
120
taacttgcca tttgttcatt cttgtctttg ttgttttttca tataatagaa atccccccaa
180
tgttttatat ctttttatgtc tttattttgt tttgttttgt ttttgagatg gagtttccct
240
cttgttgccc aggctggagt gnagtggcac agtctcggct cactgcaacc tccacttcct
300
gggttcaagc agttctcgtg ccgcagcctc ccaagtagct gggactacag gcatgcgcca
360
ccacgccagg ctaattttg tatttttagt agagatgggg tttcaccatg ttggccgggc
420
tggtctcaaa ctcctgacct caggcgatcc acccacctca gcgtcccaaa gtgctgggat
480
tataggcgtg agccaccgca cctggcctat gagtggtctt ttaattagga acaaatctaa
540
tggaaaggag agttgactga agttggccca caggattgtg agctgggcag tgccttcatg
600
aaggcttgcc accttgggac gccccagttt actggggtgt cttgcggagt gcagaaggct
660
ttctggcagc tgcctgggtt tggccagacc ctgcctcccc tcccgccggc caaccccttag
720
```

```
tccccttcct gtctccactt gcattcaggg gtggctgctg ttctgagaac attagaactg
780
ggaagagaga tggagtcaca tggattttg gtgggcatta ttctgaactt tcgtatccaa
840
gttagtcccc cttattccac tgtggcattg ccgttctaag cagttacctg atgcctgctg
900
ctgaagagct gctcacagga ggcggcggcg ccctggcac tgccccttgc attaggtctt
960
gtgtttgatg tgttcttgtg aatttacttt gtcagaacaa aatatttacg cgttgggttc
1020
aggaatttct tttagctccc catctggctg tgaaattcag gaaacctccc gttgcctagt
1080
aatcacccca tgtaggtgta cattgtgaca aagtgcatct gaccactaag gggcccccctt
1140
ggtgacccca gcacattcac agcagtgtta aaatggcctg cattttggag atgctggctg
1200
gcctttcagt gcctcccagg aagacacatg gcctttccct cttcagatgc ctgaagggag
1260
tgctttgagg caggtgatgt gctgggagtg tgggcggcct ccctctggcc ccggggcccct
1320
ctgtggacct tggctccctc cgtggacctg ggcttcgtgg tgagcactgc agcctccctg
1380
ggcattccct ccagcgccag caccactgca acatatagac ctgagtgcta ttgtattttg
1440
gcttggtgtg tatgctcttc attgtgtaaa attgctgttc ttttgacaat ttaagtgatt
1500
gttttgttta ctgtaagttt gaaaataaaa atgaagaaaa aaaattccaa tgactgtgct
1560
gtggttggag actttatta ccaagatgtt tactcttcct ttccccttcc attttgagga
1620
gctgtgtcac tcctcctccc ccccagtgct ttgtagtctc tcctatgtca taataaagct
1680
acattttctc tgaaaaaaaa aaaaaa
1706
```

<210> 6112
<211> 110
<212> PRT
<213> Homo sapiens

<400> 6112
```
Met Ser Leu Phe Cys Phe Val Leu Phe Leu Arg Trp Ser Phe Pro Leu
1               5                   10                  15
Val Ala Gln Ala Gly Val Xaa Trp His Ser Leu Gly Ser Leu Gln Pro
            20                  25                  30
Pro Leu Pro Gly Phe Lys Gln Phe Ser Cys Arg Ser Leu Pro Ser Ser
        35                  40                  45
Trp Asp Tyr Arg His Ala Pro Pro Arg Gln Ala Asn Phe Cys Ile Phe
    50                  55                  60
Ser Arg Asp Gly Val Ser Pro Cys Trp Pro Gly Trp Ser Gln Thr Pro
65                  70                  75                  80
Asp Leu Arg Arg Ser Thr His Leu Ser Val Pro Lys Cys Trp Asp Tyr
                85                  90                  95
Arg Arg Glu Pro Pro His Leu Ala Tyr Glu Trp Ser Phe Asn
```

                    100   105   110

<210> 6113
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 6113
nncggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgatgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctagta agtggggtcg ggaggcgggc gtggagggac ccacgtctgg aagttgctgc
240
agccaccacg acgctcttct acggctacgg ctttgtctct gctggtatgg gggtgggagc
300
atacgcgtag gccttggccc tatttcctgg tagaaccgag agttggaagt ccctacggcg
360
atcatgttaa ccgcgcgggc tcattctgcg gaacgaagcc gggcagaggg tggggaagac
420
taggctagat tttcgtaagg aagcagcgtc tgagccaggt ttgaggccca atattttctt
480
tccgtggcca cgtgcagact ggcccaggtg agagctgaga atcgcctccc agactcagtg
540
ttcctctcct gccttatgat tcgtgctgtt tgacacgaag tggttgtcgt tttgtgtctc
600
atacgctgtt gtgtatgatc ccattctaat attgtgaggg taagtgcagg gaattttgac
660
tccattctgg atctactgaa tttaattctc tgggatttga aagtagcacg tatgtttgca
720
ttaggcattt cgcattagac ttaacgttag gtttggtagc caataacaca agaaaaggat
780
ataactccat agtgcgttaa cccagaacta atcatttggg ttaacagatt tgtgatgtgt
840
ttctttgtag agttaaagaa agcaagtaaa cgcatgacct gccataagcg gtataaaatc
900
caaaaaaagg ttcgagaaca tcatcgaaaa ttaagaaagg aggctaaaaa gcggggtcac
960
aagaagccta ggaaagaccc aggagttcca aacagtgctc cctttaagga ggctcttctt
1020
gaggaagctg agctaaggaa acagaggctt gaagaactaa aacagcagca gaaacttgac
1080
aggcagaagg aacta
1095

<210> 6114
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6114
Met Cys Phe Phe Val Glu Leu Lys Lys Ala Ser Lys Arg Met Thr Cys

```
    1                  5                      10                     15
    His Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys
                     20                    25                    30
    Leu Arg Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp
                 35                    40                    45
    Pro Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Glu Glu
             50                    55                    60
    Ala Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys
    65                    70                    75                    80
    Leu Asp Arg Gln Lys Glu Leu
                         85
```

<210> 6115
<211> 411
<212> DNA
<213> Homo sapiens

<400> 6115
```
gcgcgcctgg ccccgccagg gcctaagttc cctgcactcg cttccccgcc tgtcgccgcc
60
gccgccgccc gcagccctcc ttctcgtggg cgctggggaa gaaactcgtc ggcgggtcta
120
actgtggcgt cccagggcgg tggagggagc aacttcgggg gcacgtcctc gtaaatcccg
180
tggaggacac tgaccctgta ccccaccctc gaggccagaa gtcggttcct ttggggggaac
240
tgaggggcga gagcactcgc ccccctgact tgcaaagttg gcgtctttac ttggcctccg
300
ggattctgcg catggcgtgt ctccaggctg ctgatgggca agacagatgt gccaggtcca
360
gaatgaactt gagaagagtt tgtagccatt cctgaatcac cttatactag t
411
```

<210> 6116
<211> 129
<212> PRT
<213> Homo sapiens

<400> 6116
```
    Met Ala Thr Asn Ser Ser Gln Val His Ser Gly Pro Gly Thr Ser Val
    1                  5                      10                     15
    Leu Pro Ile Ser Ser Leu Glu Thr Arg His Ala Gln Asn Pro Gly Gly
                     20                    25                    30
    Gln Val Lys Thr Pro Thr Leu Gln Val Arg Gly Ala Ser Ala Leu Ala
                 35                    40                    45
    Pro Gln Phe Pro Gln Arg Asn Arg Leu Leu Ala Ser Arg Val Gly Tyr
             50                    55                    60
    Arg Val Ser Val Leu His Gly Ile Tyr Glu Asp Val Pro Pro Lys Leu
    65                    70                    75                    80
    Leu Pro Pro Pro Pro Trp Asp Ala Thr Val Arg Pro Ala Asp Glu Phe
                         85                    90                    95
    Leu Pro Gln Arg Pro Arg Glu Gly Gly Leu Arg Ala Ala Ala Ala Ala
                        100                   105                   110
    Thr Gly Gly Glu Ala Ser Ala Gly Asn Leu Gly Pro Gly Gly Ala Arg
```

```
           115              120              125
      Arg
```

```
<210> 6117
<211> 962
<212> DNA
<213> Homo sapiens

<400> 6117
cttccgcctt ccccaagcca acgtctccgc cgtcggctcc gcggcgccgc catggccgac
60
gtggaagacg gagaggaaac ctgcgccctg gcctctcact ccgggagctc aggctccaag
120
tcgggaggcg acaagatgtt ctccctcaag aagtggaacg cggtggccat gtggagctgg
180
gacgtggagt gcgatacgtg cgccatctgc agggtccagg tgatggatgc ctgtcttaga
240
tgtcaagctg aaaacaaaca agaggactgt gttgtggtct ggggagaatg taatcattcc
300
ttccacaact gctgcatgtc cctgtgggtg aaacagaaca atcgctgccc tctctgccag
360
caggactggg tggtccaaag aatcggcaaa tgagagtggt tagaaggctt cttagcgcag
420
ttgttcagag ccctggtgga tcttgtaatc cagtgcccta caaaggctag aacactacag
480
gggatgaatt cttcaaatag gagccgatgg atctgtggtc ctttgggact catcaaagcc
540
ttggtttagc attttgtcag ttttatcttc agaaattctc tgcgattaag aagataattt
600
attaaaggtg gtccttccta cctctgtggt gtgtgtcgcg cacacagctt agaagtgcta
660
taaaaaagga aagagctcca aattgaatca cctttataat ttacccattt ctatacaaca
720
ggcagtggaa gcagtttcag agaacttttt gcatgcttat ggttgatcag ttaaaaaaga
780
atgttacagt aacaaataaa gtgcagttta aaacccaact cttactctta atttgttcct
840
aatacgtatt tttggcaggg agagggaacg gtccatgaaa tctttatgtg atataaggat
900
tttaagtttg ggccagtgaa cagggtaaat aaaatttaac ttttgagcat aaaaaaaaaa
960
aa
962
```

```
<210> 6118
<211> 113
<212> PRT
<213> Homo sapiens

<400> 6118
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
1               5                  10                  15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
```

```
            20                      25                      30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
            35                      40                      45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
        50                      55                      60
Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
65                      70                      75                      80
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
                85                      90                      95
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
            100                     105                     110
Lys
```

```
<210> 6119
<211> 375
<212> DNA
<213> Homo sapiens

<400> 6119
accggttgac aacctcccta tggggaagct agatacagcc ccatggacat gccccactga
60
cccccacacc ccacacggac tgcacggaaa tatcacagta accatctctc agtcacagcg
120
tggccccaca gaactcatgc ctgcttgctt taaacccacc aatgaaaact ccccatggga
180
aacctgcttg gataatactt ggacccccaa taaatgcttt aatcccacaa gtcctctgtc
240
tctgcctctc tcttgcccct acccactggt tgagcatgtg tgtcccaaac ggccctgcaa
300
ggtgtgctgc cctgttcttt ctgggctctg tcaaggaatc aaactgcttc tgttatgtga
360
tgtgtcatgt tgtgc
375
```

```
<210> 6120
<211> 118
<212> PRT
<213> Homo sapiens

<400> 6120
```

```
Met Gly Lys Leu Asp Thr Ala Pro Trp Thr Cys Pro Thr Asp Pro His
1               5                       10                      15
Thr Pro His Gly Leu His Gly Asn Ile Thr Val Thr Ile Ser Gln Ser
            20                      25                      30
Gln Arg Gly Pro Thr Glu Leu Met Pro Ala Cys Phe Lys Pro Thr Asn
            35                      40                      45
Glu Asn Ser Pro Trp Glu Thr Cys Leu Asp Asn Thr Leu Asp Pro Asn
            50                      55                      60
Lys Cys Phe Asn Pro Thr Ser Pro Leu Ser Leu Pro Leu Ser Cys Pro
65                      70                      75                      80
Tyr Pro Leu Val Glu His Val Cys Pro Lys Arg Pro Cys Lys Val Cys
                85                      90                      95
Cys Pro Val Leu Ser Gly Leu Cys Gln Gly Ile Lys Leu Leu Leu Leu
```

```
                     100              105                110
         Cys Asp Val Ser Cys Cys
                 115


<210> 6121
<211> 1039
<212> DNA
<213> Homo sapiens


<400> 6121
gacggaacgg cggtggtggc ccgcggaccg gacggggcac tatgaacgaa gaggagcagt
60
ttgtaaacat tgatttgaat gatgacaaca tttgcagtgt ttgtaaactg ggaacagaca
120
aagaaacact ctccttctgc cacatttgtt ttgagctaaa tattgagggg gtaccaaagt
180
ctgatctctt gcacaccaaa tcattaaggg gccataaaga ctgctttgaa aaataccatt
240
taattgcaaa ccagggttgt cctcgatcta agctttcaaa aagtacttat gaagaagtta
300
aaaccatttt gagtaagaag ataaactgga ttgtgcagta tgcacaaaat aaggatctgg
360
attcagattc tgaatgttct aaaaagcccc agcatcatct gtttaatttc aggcataagc
420
cagaagaaaa attactccca cagtttgagt cccaagtacc aaaatattct gcaaaatgga
480
tagatggaag tgcaggtggc atctctaact gtacacaaag aattttggag cagagggaaa
540
atacagactt tggactttct atgttacaag attcaggtgc cactttatgt cgtaacagtg
600
tattgtggcc tcatagtcac aaccaggcac agaaaaaaga agagacaatc tctagtccag
660
aggctaatgt ccagacccag catccacatt acagcagaga ggaataagtt tttgaagagt
720
taactcacca agtgcaagaa aaagattctt tggcctcaca gctccatgtc cgccacgttg
780
ccatcgaaca gcttctgaag aactgttcta agttaccatg tctgcaagta gggcgaacag
840
gaatgaagtc gcacctaccc ataaacaact gacctaaaca gacttacttc gtatgccctg
900
ccctttattg gtctcccaga catgcaaact ttgaagaagt ttgaagaaag ttgtggtccg
960
tttttttatg gtcattaaat ttgccaaaca taaggcagta tttaacatct ttgtcaaata
1020
aagcagatca ttatactct
1039


<210> 6122
<211> 221
<212> PRT
<213> Homo sapiens


<400> 6122
Met Asn Glu Glu Glu Gln Phe Val Asn Ile Asp Leu Asn Asp Asp Asn
```

```
          1                5                          10                      15
          Ile Cys Ser Val Cys Lys Leu Gly Thr Asp Lys Glu Thr Leu Ser Phe
                           20                         25                      30
          Cys His Ile Cys Phe Glu Leu Asn Ile Glu Gly Val Pro Lys Ser Asp
                           35                         40                      45
          Leu Leu His Thr Lys Ser Leu Arg Gly His Lys Asp Cys Phe Glu Lys
                     50                         55                      60
          Tyr His Leu Ile Ala Asn Gln Gly Cys Pro Arg Ser Lys Leu Ser Lys
          65                         70                         75                  80
          Ser Thr Tyr Glu Glu Val Lys Thr Ile Leu Ser Lys Lys Ile Asn Trp
                               85                         90                      95
          Ile Val Gln Tyr Ala Gln Asn Lys Asp Leu Asp Ser Asp Ser Glu Cys
                           100                        105                     110
          Ser Lys Lys Pro Gln His His Leu Phe Asn Phe Arg His Lys Pro Glu
                     115                        120                     125
          Glu Lys Leu Leu Pro Gln Phe Glu Ser Gln Val Pro Lys Tyr Ser Ala
                     130                        135                     140
          Lys Trp Ile Asp Gly Ser Ala Gly Gly Ile Ser Asn Cys Thr Gln Arg
          145                        150                        155                 160
          Ile Leu Glu Gln Arg Glu Asn Thr Asp Phe Gly Leu Ser Met Leu Gln
                           165                        170                     175
          Asp Ser Gly Ala Thr Leu Cys Arg Asn Ser Val Leu Trp Pro His Ser
                     180                        185                     190
          His Asn Gln Ala Gln Lys Lys Glu Glu Thr Ile Ser Ser Pro Glu Ala
                     195                        200                     205
          Asn Val Gln Thr Gln His Pro His Tyr Ser Arg Glu Glu
               210                        215                     220
```

<210> 6123
<211> 900
<212> DNA
<213> Homo sapiens

<400> 6123
ntgcatgcct gtataccaca gctactcggg aggctgaggc gggagaatcg cttgaaccca
60
ggaggcggag gttgcggtga gctgagatcg caccattgca ctccagcctg ggcaacaaga
120
gcgaaacaac aagagaaaaa aaaggaagct gccctctgcc caaaacccac gtcgaggtcc
180
ccaaacctgg gacccttagg tcttttctca cttagcgtgc ccaaccttct cctggcagga
240
aacaagcctc caggtctgct cccccgcaaa ggactataca tggcaaatga cttaaagctc
300
ctgagacacc atctccagat tcccatccac ttccccaagg atttcttgtc tgtgatgctt
360
gaaaaaggaa gtttgtctgc catgcgtttc ctcaccgccg tgaacttgga gcatccagag
420
atgctggaga aagcgtcccg ggagctgtgg atgcgcgtct ggtcaagggt gagtgtgggg
480
ctctgggaat cctctgggag gaccttggat gactttctga ccttccccag gcacgttttc
540
agggtcatga tcctgccccc gcccggggga tctactgtcc tcccagtcac acccctctcc
600
```

ccgcaccgcc ttcctgctgt cttctcttct tcccagaatg aagacatcac cgagccgcag
660

agcatcctgg cggctgcaga gaaggctggt atgtctgcag aacaagccca gggacttctg
720

gaaaagatcg caacgccaaa ggtgaagaac cagctcaagg agaccactga ggcagcctgc
780

agatacggag cctttgggct gcccatcacc gtggcccatg tggatggcca aacccacatg
840

ttatttggct ctgaccggat ggagctgctg gcgcacctgc tgggagagaa gtggatgggc
900


<210> 6124
<211> 300
<212> PRT
<213> Homo sapiens


<400> 6124
Xaa His Ala Cys Ile Pro Gln Leu Leu Gly Arg Leu Arg Arg Glu Asn
1               5                   10                  15
Arg Leu Asn Pro Gly Gly Gly Gly Cys Gly Glu Leu Arg Ser His His
            20                  25                  30
Cys Thr Pro Ala Trp Ala Thr Arg Ala Lys Gln Gln Glu Lys Lys Lys
            35                  40                  45
Glu Ala Ala Leu Cys Pro Lys Pro Thr Ser Arg Ser Pro Asn Leu Gly
        50                  55                  60
Pro Leu Gly Leu Phe Ser Leu Ser Val Pro Asn Leu Leu Leu Ala Gly
65                  70                  75                  80
Asn Lys Pro Pro Gly Leu Leu Pro Arg Lys Gly Leu Tyr Met Ala Asn
                85                  90                  95
Asp Leu Lys Leu Leu Arg His His Leu Gln Ile Pro Ile His Phe Pro
            100                 105                 110
Lys Asp Phe Leu Ser Val Met Leu Glu Lys Gly Ser Leu Ser Ala Met
            115                 120                 125
Arg Phe Leu Thr Ala Val Asn Leu Glu His Pro Glu Met Leu Glu Lys
            130                 135                 140
Ala Ser Arg Glu Leu Trp Met Arg Val Trp Ser Arg Val Ser Val Gly
145                 150                 155                 160
Leu Trp Glu Ser Ser Gly Arg Thr Leu Asp Asp Phe Leu Thr Phe Pro
                165                 170                 175
Arg His Val Phe Arg Val Met Ile Leu Pro Pro Pro Gly Gly Ser Thr
            180                 185                 190
Val Leu Pro Val Thr Pro Leu Ser Pro His Arg Leu Pro Ala Val Phe
            195                 200                 205
Ser Ser Ser Gln Asn Glu Asp Ile Thr Glu Pro Gln Ser Ile Leu Ala
        210                 215                 220
Ala Ala Glu Lys Ala Gly Met Ser Ala Glu Gln Ala Gln Gly Leu Leu
225                 230                 235                 240
Glu Lys Ile Ala Thr Pro Lys Val Lys Asn Gln Leu Lys Glu Thr Thr
                245                 250                 255
Glu Ala Ala Cys Arg Tyr Gly Ala Phe Gly Leu Pro Ile Thr Val Ala
                260                 265                 270
His Val Asp Gly Gln Thr His Met Leu Phe Gly Ser Asp Arg Met Glu
            275                 280                 285
Leu Leu Ala His Leu Leu Gly Glu Lys Trp Met Gly

          290                    295                    300

<210> 6125
<211> 468
<212> DNA
<213> Homo sapiens

<400> 6125
nctacagtca ctcaggagaa gtcccgcatg gaggcttctt acttggctga caagaaaaag
60
atgaaacagg acttagagga tgccagtaac aaggcggagg aggagagggc ccgcctggag
120
ggagaattga aggggctgca ggagcaaata gcagaaacca aagcccggct tatcacgcag
180
cagcatgatc gggcccaaga gcagagtgac catgccttga tgctgcgtga gctccagaag
240
ctgctgcagg aggagaggac ccagcgccag gacttggagc ttaggttaga agagacccga
300
gaagccttgg caggacgagc atatgcagct gaacagatgg aaggatttga actgcagacc
360
aagcagctga cccgtgaggt ggaggagctg aaaagtgaac tgcaggccat tcgagatgag
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468


<210> 6126
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6126
Xaa Thr Val Thr Gln Glu Lys Ser Arg Met Glu Ala Ser Tyr Leu Ala
1               5                   10                  15
Asp Lys Lys Lys Met Lys Gln Asp Leu Glu Asp Ala Ser Asn Lys Ala
            20                  25                  30
Glu Glu Glu Arg Ala Arg Leu Glu Gly Glu Leu Lys Gly Leu Gln Glu
        35                  40                  45
Gln Ile Ala Glu Thr Lys Ala Arg Leu Ile Thr Gln Gln His Asp Arg
    50                  55                  60
Ala Gln Glu Gln Ser Asp His Ala Leu Met Leu Arg Glu Leu Gln Lys
65                  70                  75                  80
Leu Leu Gln Glu Glu Arg Thr Gln Arg Gln Asp Leu Glu Leu Arg Leu
                85                  90                  95
Glu Glu Thr Arg Glu Ala Leu Ala Gly Arg Ala Tyr Ala Ala Glu Gln
            100                 105                 110
Met Glu Gly Phe Glu Leu Gln Thr Lys Gln Leu Thr Arg Glu Val Glu
            115                 120                 125
Glu Leu Lys Ser Glu Leu Gln Ala Ile Arg Asp Glu Lys Asn Gln Pro
        130                 135                 140
Asp Pro Arg Leu Gln Glu Leu Gln Glu Glu Ala Ala
145                 150                 155


<210> 6127
<211> 1900

<212> DNA
<213> Homo sapiens

<400> 6127
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120
cgggcaagag actccaatat ggtgagggcg gcagcagagc tggccctgag ctgcctgcct
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cacgcccatg cattgaaccc taatgagatc cagcgggccc tggtgcagtg caaggaacag
240
gacaacctga tgttggagaa ggcctgcatg gcagtggaag aggcagctaa gggtgggggc
300
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360
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420
gcaggtgggg aagctgggcg gggtatgcct gagggtagag ggggcccagg gactgagccg
480
gttacagtgg cagcggcagc agtgacagca gcagccacag tggtgcccgt catatcggtg
540
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600
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720
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960
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1080
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1140
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1200
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1260
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1320
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1380
tacatgcagt acatccacca ccgcttgatt cacctgactc ctgcggacta cgacgacttt
1440
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1500

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1680
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1800
gggggcgttg ggtggcctct ggtatttatt tggcatttat aaatatataa actccttttt
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1900
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<210> 6128
<211> 530
<212> PRT
<213> Homo sapiens
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<400> 6128
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Thr Ile Leu Val Glu Cys Trp Asp Gly His Leu Thr Pro Pro Glu Val
            20              25              30
Ala Ser Leu Ala Asp Arg Ala Ser Arg Ala Arg Asp Ser Asn Met Val
            35              40              45
Arg Ala Ala Ala Glu Leu Ala Leu Ser Cys Leu Pro His Ala His Ala
        50              55              60
Leu Asn Pro Asn Glu Ile Gln Arg Ala Leu Val Gln Cys Lys Glu Gln
65              70              75              80
Asp Asn Leu Met Leu Glu Lys Ala Cys Met Ala Val Glu Glu Ala Ala
            85              90              95
Lys Gly Gly Gly Val Tyr Pro Glu Val Leu Phe Glu Val Ala His Gln
            100             105             110
Trp Phe Trp Leu Tyr Glu Gln Thr Ala Gly Gly Ser Ser Thr Ala Arg
            115             120             125
Glu Gly Ala Thr Ser Cys Ser Ala Ser Gly Ile Arg Ala Gly Gly Glu
            130             135             140
Ala Gly Arg Gly Met Pro Glu Gly Arg Gly Gly Pro Gly Thr Glu Pro
145             150             155             160
Val Thr Val Ala Ala Ala Ala Val Thr Ala Ala Ala Thr Val Val Pro
            165             170             175
Val Ile Ser Val Gly Ser Ser Leu Tyr Pro Gly Pro Gly Leu Gly His
            180             185             190
Gly His Ser Pro Gly Leu His Pro Tyr Thr Ala Leu Gln Pro His Leu
            195             200             205
Pro Cys Ser Pro Gln Tyr Leu Thr His Pro Ala His Pro Ala His Pro
        210             215             220
Met Pro His Met Pro Arg Pro Ala Val Phe Pro Val Pro Ser Ser Ala
225             230             235             240
Tyr Pro Gln Gly Val His Pro Ala Phe Leu Gly Ala Gln Tyr Pro Tyr
            245             250             255
Ser Val Thr Pro Pro Ser Leu Ala Ala Thr Ala Val Ser Phe Pro Val
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            260                    265                    270
Pro Ser Met Ala Pro Ile Thr Val His Pro Tyr His Thr Glu Pro Gly
        275                    280                    285
Leu Pro Leu Pro Thr Ser Val Ala Cys Glu Leu Trp Gly Gln Gly Thr
    290                    295                    300
Val Ser Ser Val His Pro Ala Ser Thr Phe Pro Ala Ile Gln Gly Ala
305                    310                    315                    320
Ser Leu Pro Ala Leu Thr Thr Gln Pro Ser Pro Leu Val Ser Gly Gly
            325                    330                    335
Phe Pro Pro Pro Glu Glu Glu Thr His Ser Gln Pro Val Asn Pro His
            340                    345                    350
Ser Leu His His Leu His Ala Ala Tyr Arg Val Gly Met Leu Ala Leu
        355                    360                    365
Glu Met Leu Gly Arg Arg Ala His Asn Asp His Pro Asn Asn Phe Ser
        370                    375                    380
Arg Ser Pro Pro Tyr Thr Asp Asp Val Lys Trp Leu Leu Gly Leu Ala
385                    390                    395                    400
Ala Lys Leu Gly Val Asn Tyr Val His Gln Phe Cys Val Gly Ala Ala
            405                    410                    415
Lys Gly Val Leu Ser Pro Phe Val Leu Gln Glu Ile Val Met Glu Thr
            420                    425                    430
Leu Gln Arg Leu Ser Pro Ala His Ala His Asn His Leu Arg Ala Pro
        435                    440                    445
Ala Phe His Gln Leu Val Gln Arg Cys Gln Gln Ala Tyr Met Gln Tyr
    450                    455                    460
Ile His His Arg Leu Ile His Leu Thr Pro Ala Asp Tyr Asp Asp Phe
465                    470                    475                    480
Val Asn Ala Ile Arg Ser Ala Arg Ser Ala Phe Cys Leu Thr Pro Met
            485                    490                    495
Gly Met Met Gln Phe Asn Asp Ile Leu Gln Asn Leu Lys Arg Ser Lys
        500                    505                    510
Gln Thr Lys Glu Leu Trp Gln Arg Val Ser Leu Glu Met Ala Thr Phe
        515                    520                    525
Ser Pro
530
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<210> 6129
<211> 2012
<212> DNA
<213> Homo sapiens
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120
gggggggggg gggctgatcg gcgctaccgg attggacaac ttggcatggg gcggggcctc
180
tgggaggcgt ggcctccggc cggctcctct gctgttgcca agggaaactg ccgcgaggag
240
gcggaaggag cagaggaccg gcagccggcg tcgaggcggg gcgcgggaac gacggcggcc
300
atggcggcct cggggcccgg gtgtcgcagc tggtgcttgt gtcccgaggt gccatccgcc
360
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accttcttca ctgcgctgct ctcgctgctg gtttccgggc ctcgcctgtt cctgctgcag
420
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480
tacaggctgg taacctacat ctttgtctac gagaatccca tctccctgct ctgcggcgct
540
atcatcatct ggcgctttgc tggcaatttc gagagaaccg tgggcaccgt ccgccactgc
600
ttcttcaccg tgatcttcgc catcttctcc gctatcatct tcctgtcatt cgaggctgtg
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720
gccatgctgg gagtcaccac cgtccgttct cggatgaggc gggccctggt gtttggcatg
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gcagcccaga gccggaaact gaacccggtg cctggctcct accccacaca gagctgccac
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1740
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1800
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1860
ccaccccgat tcctctcccc agaagcggtg ggatgggccc ccatgaactg cagcagcatg
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5307

|

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2012

<210> 6130
<211> 364
<212> PRT
<213> Homo sapiens

<400> 6130
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Val Pro Ser Ala Thr Phe Phe Thr Ala Leu Leu Ser Leu Leu Val Ser
            20   25   30
Gly Pro Arg Leu Phe Leu Leu Gln Gln Pro Leu Ala Pro Ser Gly Leu
            35   40   45
Thr Leu Lys Ser Glu Ala Leu Arg Asn Trp Gln Val Tyr Arg Leu Val
        50   55   60
Thr Tyr Ile Phe Val Tyr Glu Asn Pro Ile Ser Leu Leu Cys Gly Ala
65   70   75   80
Ile Ile Ile Trp Arg Phe Ala Gly Asn Phe Glu Arg Thr Val Gly Thr
                85   90   95
Val Arg His Cys Phe Phe Thr Val Ile Phe Ala Ile Phe Ser Ala Ile
            100   105   110
Ile Phe Leu Ser Phe Glu Ala Val Ser Ser Leu Ser Lys Leu Gly Glu
            115   120   125
Val Glu Asp Ala Arg Gly Phe Thr Pro Val Ala Phe Ala Met Leu Gly
        130   135   140
Val Thr Thr Val Arg Ser Arg Met Arg Arg Ala Leu Val Phe Gly Met
145   150   155   160
Val Val Pro Ser Val Leu Val Pro Trp Leu Leu Leu Gly Ala Ser Trp
                165   170   175
Leu Ile Pro Gln Thr Ser Phe Leu Ser Asn Val Cys Gly Leu Ser Ile
            180   185   190
Gly Leu Ala Tyr Gly Leu Thr Tyr Cys Tyr Ser Ile Asp Leu Ser Glu
        195   200   205
Arg Val Ala Leu Lys Leu Asp Gln Thr Phe Pro Phe Ser Leu Met Arg
    210   215   220
Arg Ile Ser Val Phe Lys Tyr Val Ser Gly Ser Ser Ala Glu Arg Arg
225   230   235   240
Ala Ala Gln Ser Arg Lys Leu Asn Pro Val Pro Gly Ser Tyr Pro Thr
                245   250   255
Gln Ser Cys His Pro His Leu Ser Pro Ser His Pro Val Ser Gln Thr
            260   265   270
Gln His Ala Ser Gly Gln Lys Leu Ala Ser Trp Pro Ser Cys Thr Pro
        275   280   285
Gly His Met Pro Thr Leu Pro Pro Tyr Gln Pro Ala Ser Gly Leu Cys
    290   295   300
Tyr Val Gln Asn His Phe Gly Pro Asn Pro Thr Ser Ser Ser Val Tyr
305   310   315   320
Pro Ala Ser Ala Gly Thr Ser Leu Gly Ile Gln Pro Pro Thr Pro Val
                325   330   335
Asn Ser Pro Gly Thr Val Tyr Ser Gly Ala Leu Gly Thr Pro Gly Ala
            340   345   350
Ala Gly Ser Lys Glu Ser Ser Arg Val Pro Met Pro

355   360

<210> 6131
<211> 3526
<212> DNA
<213> Homo sapiens

<400> 6131
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120
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180
gggccccctc cacagatccg catcctcaag aggcccacca gcaacggtgt ggtcagcagc
240
cccaactcca ccagcaggcc cacccttcca gtcaagtccc tagcacagcg agaggccgag
300
tacgccgagg cccggaagcg gatcctgggc agcgccagcc ccgaggagga gcaggagaaa
360
cccatcctcg acaggtcttc ctctgatctt cttcccttca ggccaaccag gatctcccaa
420
cccgaagaca gcaggcagcc caataatgtg atcagacagc ctttgggtcc tgatgggtca
480
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540
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gaaccccatg cactgtgacc tccccccttc tcccccttcc cactgtgatt ggcacatcga
720
caagggctgt cccaagtcaa tggaaaggga aagggtgggg gttaggggaa ggttggggggg
780
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1260
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1320
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1380

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1500
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1560
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1620
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2520
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2820
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2880
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2940
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3000
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cgcttcccat gagccactac tctgatgtca gcctataacc aaaggagctg gggggtccag
3060

gcctggtgac caacctttct cagcccactc aatcagggtg ctccccacct gcaggcagga
3120

ggcaacaccc tatctgctac catcagcccc ttccagagcc catctgcccc gcccagccct
3180

gccctgccca gccataccct gctctgcccc atctgggggt gccctgctca gggatgggct
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ggcagggctg tacccagcct ccctggtaag cagagactca agaaacctct ggggtcctgt
3300

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3360

atgggaggga gggctgcacc cctgcagtct tactctgctg gtgtagcggg cagctgccca
3420

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3480

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3526

<210> 6132
<211> 167
<212> PRT
<213> Homo sapiens

<400> 6132
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Glu Glu Ala Ala Asp Ser Gly Glu Ile Asp Arg Arg Leu Glu Lys Lys
            20   25   30
Leu Lys Ile Thr Gln Lys Glu Ser Arg Lys Ser Lys Ser Pro Pro Lys
            35   40   45
Val Pro Ile Val Ile Gln Asp Asp Ser Leu Pro Ala Gly Pro Pro Pro
        50   55   60
Gln Ile Arg Ile Leu Lys Arg Pro Thr Ser Asn Gly Val Val Ser Ser
65   70   75   80
Pro Asn Ser Thr Ser Arg Pro Thr Leu Pro Val Lys Ser Leu Ala Gln
                85   90   95
Arg Glu Ala Glu Tyr Ala Glu Ala Arg Lys Arg Ile Leu Gly Ser Ala
            100   105   110
Ser Pro Glu Glu Glu Gln Glu Lys Pro Ile Leu Asp Arg Ser Ser Ser
            115   120   125
Asp Leu Leu Pro Phe Arg Pro Thr Arg Ile Ser Gln Pro Glu Asp Ser
        130   135   140
Arg Gln Pro Asn Asn Val Ile Arg Gln Pro Leu Gly Pro Asp Gly Ser
145   150   155   160
His Gly Phe Lys Gln Arg Arg
                165

<210> 6133
<211> 4156
<212> DNA
<213> Homo sapiens

<400> 6133

5311

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960
aacactaatc gatctgtaaa ccacaggtat aagcactttg actggttata tgagcgtctc
1020
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1140
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1200
gatgagaagg aatggaaaac tggaaagagg aaggccgaga gagatgagct ggcgggagtc
1260
atgatatttt ccaccatgga accagaggca cctgacttgg acttagtaga aatagagcag
1320
aagtgcgagg ctgtggggaa gttcaccaag gccatggatg acggcgtgaa ggagctgctg
1380
acggtggggc aggagcactg gaagcgctgc acgggcccat acccaaggga atatcagaag
1440
ataggaaagg ccttgcagag tttggccaca gtgttcagtt ccagtggcta tcaaggtgaa
1500
acagatctca atgatgcaat aacagaagca ggaaagactt atgaagaaat tgccagtctc
1560
gtggcagaac agccaaagaa agatctccat ttcctgatgg aatgtaatca cgagtataaa
1620
```

```
ggttttcttg gctgcttccc tgacatcatt ggcactcaca agggagcaat agaaaaagtg
1680
aaagaaagtg acaaactagt tgcaacaagt aaaatcaccc tacaagacaa acagaacatg
1740
gtgaagagag tcagcatcat gtcttacgcg ttgcaagctg agatgaatca ctttcacagt
1800
aaccggatct atgattacaa cagtgtcatc cgcctgtacc tggagcagca agtgcaattt
1860
tacgaaacga ttgcagaaaa gctgaggcag gccctcagcc gctttccagt gatgtaggac
1920
agaacgggcc ttgaagagaa tgccgcgtgc tttctcctga cttggggcaa tgcaattcaa
1980
aacttttttt cccctattat tcagaaaaaa aaggaaacaa aaccaaaaag aaagagttgc
2040
aaaaaactgc atttatttta ttagccaccc taaatgcgtc agttatttag ggatggtctt
2100
ttgttcattt ccgcatccat tatttaaacc agtggaaatt gtctctattt ttggaaagta
2160
cttaaaagtt accagaattt tcaatggaaa atgaggggtt tctccccact gatattttac
2220
atagagtcat aatttatatg tcttataaat tataagtctt atataattta taagtctccc
2280
acaatcttcc agttcttacc cagtgtcaga taattaatta ctaattactt tcttaaaaac
2340
atgaactatg ccagaataaa aaatatctat gtttgtatat ttttataact cctttcagtc
2400
ctctggggct cctgtcattg agggaagtcg ttacgccttt cactgccaca gttacagctc
2460
aagtgcttac acttcaagag ggaggacgct gggggccct ggggctgcta gtgccatcgt
2520
ggtgtgtggc aggtgggcca tcccatgtcc ctccaggggg accccacagc ctggcagatg
2580
agcagatacc cctggccacc catgtcctca gcgacatttc tgatgtgctg ctcttatgtg
2640
aggaccagtg ctttctctct ttgcacttcc ttcctaatct tggttaaggc atgttttatg
2700
ccatgaagaa tacattagaa gaattgaggg actttgtaga gaattttgtg gctttggtcc
2760
aacgggtgag tggctgtgcg gaggcctgtg ttcgggaggg cctgggagaa ggagggcacc
2820
cagcaccccg gcgtctctgg ccctttctta ttctttggct cctcatccac cgtgatgaga
2880
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3000
tgagaagggc tgcagcctca gcagtgtaca gagtccccgg cgctctgagg ttggagagaa
3060
agaacagacc agcgcccttc ctgactacat ccgaaacttc acacagggtg tttctgagca
3120
ccagcacttc cagcgcttca cttaacggca taaagcaaaa caggaccttg gcacaccgtc
3180
agctcgaact caacactggc agccaccgtc tcacccctgc ggaggagcgc tcccgtctcc
3240
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cacaggtgcc ttaccgcgtt ccctcccgct gctttcattt ttctgaccta ataattacgg
3300
gaaatggaaa gtctgggcca gcatcaataa aatgacacca aaaataagta gatgaaatca
3360
aatgaatatg agaacatctt gttcttcaat atcacgggtt tttgttaatg tttcataagt
3420
aattctcccc acttgatttt tcttctataa aatcccatag aacaatgttt atgctatagc
3480
catttaatat atgtacaaat tgtaaagaat atgtataaat gttttacacg aatgtaagag
3540
catgtagaag ccaacatata aataaattgt ttaaaaaaac tgtacagtaa attctcaaag
3600
cactttttca aaacactttt tggactttgt gtgtgatttt tgttgttgtt gttaagtact
3660
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3720
ctgacatgaa ttcatcattt cagttccgta ggtcagtgtt gcggtccggg aagcgtatca
3780
taaccacctg ggagttgcca agaagcagac agtctcccag tgtctgactc tcggatattt
3840
ggatttgact ggtgtgaggc aaagtgaaaa agggatgggg gaaatggaga tggcacgggc
3900
tcctcagagc gtggtagccg actgtgagga aaagcagagg gaatgtgaaa gaaaataaga
3960
gaatccacgg gatttgatgc ctggaagatt ctccttcaag tggcaacatg gcatatatat
4020
ccttctccgg ggagtcacat gcaccatttg gttcttagat acgttgatgt tttgattttt
4080
aatgatttgt atcaacctgt aggtaccaca gaagagctgt agtcatacaa tcacataact
4140
tttacaaata tagtgg
4156
```

```
<210> 6134
<211> 595
<212> PRT
<213> Homo sapiens
```

```
<400> 6134
Met Ala Thr Lys Ala Arg Val Met Tyr Asp Phe Ala Ala Glu Pro Gly
1               5                   10                  15
Asn Asn Glu Leu Thr Val Asn Glu Gly Glu Ile Ile Thr Ile Thr Asn
            20                  25                  30
Pro Asp Val Gly Gly Gly Trp Leu Glu Gly Arg Asn Ile Lys Gly Glu
        35                  40                  45
Arg Gly Leu Val Pro Thr Asp Tyr Val Glu Ile Leu Pro Ser Asp Gly
    50                  55                  60
Lys Asp Gln Phe Ser Cys Gly Asn Ser Val Ala Asp Gln Ala Phe Leu
65                  70                  75                  80
Asp Ser Leu Ser Ala Ser Thr Ala Gln Ala Ser Ser Ser Ala Ala Ser
                85                  90                  95
Asn Asn His Gln Val Gly Ser Gly Asn Asp Pro Trp Ser Ala Trp Ser
            100                 105                 110
Ala Ser Lys Ser Gly Asn Trp Glu Ser Ser Glu Gly Trp Gly Ala Gln
```

```
               115                    120                      125
Pro Glu Gly Ala Gly Ala Gln Arg Asn Thr Asn Thr Pro Asn Asn Trp
      130                    135                      140
Asp Thr Ala Phe Gly His Pro Gln Ala Tyr Gln Gly Pro Ala Thr Gly
145                    150                      155                160
Asp Asp Asp Asp Trp Asp Glu Asp Trp Asp Gly Pro Lys Ser Ser Ser
                   165              170                      175
Tyr Phe Lys Asp Ser Glu Ser Ala Asp Ala Gly Gly Ala Gln Arg Gly
              180                185                      190
Asn Ser Arg Ala Ser Ser Ser Ser Met Lys Ile Pro Leu Asn Lys Phe
              195                200                      205
Pro Gly Phe Ala Lys Pro Gly Thr Glu Gln Tyr Leu Leu Ala Lys Gln
      210                    215                      220
Leu Ala Lys Pro Lys Glu Lys Ile Pro Ile Ile Val Gly Asp Tyr Gly
225                    230                      235                240
Pro Met Trp Val Tyr Pro Thr Ser Thr Phe Asp Cys Val Val Ala Asp
                   245              250                      255
Pro Arg Lys Gly Ser Lys Met Tyr Gly Leu Lys Ser Tyr Ile Glu Tyr
              260                265                      270
Gln Leu Thr Pro Thr Asn Thr Asn Arg Ser Val Asn His Arg Tyr Lys
              275                280                      285
His Phe Asp Trp Leu Tyr Glu Arg Leu Leu Val Lys Phe Gly Ser Ala
      290                    295                      300
Ile Pro Ile Pro Ser Leu Pro Asp Lys Gln Val Thr Gly Arg Phe Glu
305                    310                      315                320
Glu Glu Phe Ile Lys Met Arg Met Glu Arg Leu Gln Ala Trp Met Thr
                   325              330                      335
Arg Met Cys Arg His Pro Val Ile Ser Glu Ser Glu Val Phe Gln Gln
              340                345                      350
Phe Leu Asn Phe Arg Asp Glu Lys Glu Trp Lys Thr Gly Lys Arg Lys
              355                360                      365
Ala Glu Arg Asp Glu Leu Ala Gly Val Met Ile Phe Ser Thr Met Glu
      370                    375                      380
Pro Glu Ala Pro Asp Leu Asp Leu Val Glu Ile Glu Gln Lys Cys Glu
385                    390                      395                400
Ala Val Gly Lys Phe Thr Lys Ala Met Asp Asp Gly Val Lys Glu Leu
                   405              410                      415
Leu Thr Val Gly Gln Glu His Trp Lys Arg Cys Thr Gly Pro Leu Pro
              420                425                      430
Lys Glu Tyr Gln Lys Ile Gly Lys Ala Leu Gln Ser Leu Ala Thr Val
              435                440                      445
Phe Ser Ser Ser Gly Tyr Gln Gly Glu Thr Asp Leu Asn Asp Ala Ile
      450                    455                      460
Thr Glu Ala Gly Lys Thr Tyr Glu Glu Ile Ala Ser Leu Val Ala Glu
465                    470                      475                480
Gln Pro Lys Lys Asp Leu His Phe Leu Met Glu Cys Asn His Glu Tyr
                   485              490                      495
Lys Gly Phe Leu Gly Cys Phe Pro Asp Ile Ile Gly Thr His Lys Gly
              500                505                      510
Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr Ser Lys
      515                    520                      525
Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser Ile Met
      530                    535                      540
Ser Tyr Ala Leu Gln Ala Glu Met Asn His Phe His Ser Asn Arg Ile
```

5315

```
545                  550                  555                  560
Tyr Asp Tyr Asn Ser Val Ile Arg Leu Tyr Leu Glu Gln Gln Val Gln
                565                  570                  575
Phe Tyr Glu Thr Ile Ala Glu Lys Leu Arg Gln Ala Leu Ser Arg Phe
            580                  585                  590
Pro Val Met
        595
```

```
<210> 6135
<211> 526
<212> DNA
<213> Homo sapiens
```

```
<400> 6135
tcgacgtccc tccttctgag ccatcagcaa ctaggcgact acaggaaact tactccaaat
60
tgctactaga aaagaccttg cttgaagagc catctcatca acatgttacg caggaaacac
120
aggccaaacc agggtatcag ccatctggag aatctgacaa agaaaacaaa gtacaggaac
180
gtcccccaag tgcgtcttcc agtagtgaca tgtctctctc agaacctcca cagcctcttg
240
caagaaaaga cttgatggaa tctacatgga tgcagcctga aagattgagc ccacaagttc
300
accattctca accacagcct tttgctggaa cagctggaag tttactctcc catctcttga
360
gtttagagca tgtaggaatt ttgcataagg attttgaatc tattttacca accaggaaga
420
atcataatat ggcttcaagg ccattaactt ttacacctca accatatgtg acctcaccag
480
ctgcttatac agatgccttg gtaaaaccta gtgccagcca atataa
526
```

```
<210> 6136
<211> 105
<212> PRT
<213> Homo sapiens
```

```
<400> 6136
Met Ser Leu Ser Glu Pro Pro Gln Pro Leu Ala Arg Lys Asp Leu Met
1               5                   10                  15
Glu Ser Thr Trp Met Gln Pro Glu Arg Leu Ser Pro Gln Val His His
            20                  25                  30
Ser Gln Pro Gln Pro Phe Ala Gly Thr Ala Gly Ser Leu Leu Ser His
        35                  40                  45
Leu Leu Ser Leu Glu His Val Gly Ile Leu His Lys Asp Phe Glu Ser
    50                  55                  60
Ile Leu Pro Thr Arg Lys Asn His Asn Met Ala Ser Arg Pro Leu Thr
65                  70                  75                  80
Phe Thr Pro Gln Pro Tyr Val Thr Ser Pro Ala Ala Tyr Thr Asp Ala
                85                  90                  95
Leu Val Lys Pro Ser Ala Ser Gln Tyr
            100                 105
```

<210> 6137
<211> 2073
<212> DNA
<213> Homo sapiens

<400> 6137
ngcggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgctgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctaagt taaagaaagc aagtaaacgc atgacctgcc ataagcggta taaaatccaa
240
aaaaggttc gagaacatca tcgaaaatta agaaaggagg ctaaaaagca gggtcacaag
300
aagcctagga aagacccagg agttccaaac agtgctccct ttaaggaggc tcttcttagg
360
gaagctgagc taaggaaaca gaggcttgaa gaactaaaac agcagcagaa acttgacagg
420
cagaaggaac tagaaaagaa aagaaaactt gaaactaatc ctgatattaa gnccatcaaa
480
tgtggaaccn ntatggaaaa ggagtttggg ctttgcaaaa ctgagaacaa agccaagtcg
540
ggcaaacaga attcaaagaa gctgtactgc caagaactta aaaggtgat tgaagcctcc
600
gatgttgtcc tagaggtgtt ggatgccaga gatcctcttg gttgcagatg tcctcaggta
660
gaagaggcca ttgtccagag tggacagaaa aagctggtac ttatattaaa taaatcagat
720
ctggtaccaa aggagaattt ggagagctgg ctaaattatt tgaagaaaga attgccaaca
780
gtggtgttca gagcctcaac aaaaccaaag gataaaggga agataaccaa gcgtgtgaag
840
gcaaagaaga atgctgctcc attcagaagt gaagtctgct ttgggaaaga gggcctttgg
900
aaacttcttg gaggttttca ggaaacttgc agcaaagcca ttcgggttgg agtaattggt
960
ttcccaaatg tggggaaaag cagcattatc aatagcttaa acaagaaca gatgtgtaat
1020
gttggtgtat ccatggggct tacaaggagc atgcaagttg tccccttgga caaacagatc
1080
acaatcatag atagtccgag cttcatcgta tctccactta attcctcctc tgcgcttgct
1140
ctgcgaagtc cagcaagtat tgaagtagta aaaccgatgg aggctgccag tgccatcctt
1200
tcccaggctg atgctcgaca ggtagtactg aaatatactg tcccaggcta caggaattct
1260
ctggaatttt ttactgtgct tgctcagaga agaggtatgc accaaaaagg tggaatccca
1320
aatgttgaag gtgctgccaa actgctgtgg tctgagtgga caggtgcctc attagcttac
1380
tattgccatc cccctacatc ttggactcct cctccatatt ttaatgagag tattgtggta
1440

```
gacatgaaaa gcggcttcaa tctggaagaa ctggaaaaga acaatgcaca gagcataaga
1500
gccatcaagg gccctcattt ggccaatagc atccttttcc agtcttccgg tctgacaaat
1560
ggaataatag aagaaaagga catacatgaa gaattgccaa aacggaaaga aaggaagcag
1620
gaggagaggg aggatgacaa agacagtgac caggaaactg ttgatgaaga agttgatgaa
1680
aacagctcag gcatgtttgc tgcagaagag acaggggagg cactgtctga ggagactaca
1740
gcaggtgaac agtctacaag gtcttttatc ttggataaaa tcattgaaga ggatgatgct
1800
tatgacttca gtacagatta tgtgtaacag aacaatggct ttttatgatt ttttttttta
1860
acattttaag cagactgcta aactgttctc tgtataagtt atggtatgca tgagctgtgt
1920
aaattttgtg aatatgtatt atattaaaac caggcaactt ggaatcccta aattctgtaa
1980
aaagacaatt catctcattg tgagtggaag tagttatctg gaataaaaaa agaagatacc
2040
tattgaaaaa aaaaaaaaaa aaaaaaaaaa aaa
2073
```

```
<210> 6138
<211> 550
<212> PRT
<213> Homo sapiens

<400> 6138
Met Lys Arg Pro Lys Leu Lys Lys Ala Ser Lys Arg Met Thr Cys His
1               5                   10                  15
Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys Leu
            20                  25                  30
Arg Lys Glu Ala Lys Lys Gln Gly His Lys Lys Pro Arg Lys Asp Pro
        35                  40                  45
Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Arg Glu Ala
    50                  55                  60
Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys Leu
65                  70                  75                  80
Asp Arg Gln Lys Glu Leu Glu Lys Lys Arg Lys Leu Glu Thr Asn Pro
                85                  90                  95
Asp Ile Lys Xaa Ile Lys Cys Gly Thr Xaa Met Glu Lys Glu Phe Gly
            100                 105                 110
Leu Cys Lys Thr Glu Asn Lys Ala Lys Ser Gly Lys Gln Asn Ser Lys
        115                 120                 125
Lys Leu Tyr Cys Gln Glu Leu Lys Lys Val Ile Glu Ala Ser Asp Val
    130                 135                 140
Val Leu Glu Val Leu Asp Ala Arg Asp Pro Leu Gly Cys Arg Cys Pro
145                 150                 155                 160
Gln Val Glu Glu Ala Ile Val Gln Ser Gly Gln Lys Lys Leu Val Leu
                165                 170                 175
Ile Leu Asn Lys Ser Asp Leu Val Pro Lys Glu Asn Leu Glu Ser Trp
                180                 185                 190
Leu Asn Tyr Leu Lys Lys Glu Leu Pro Thr Val Val Phe Arg Ala Ser
```

5318

```
            195                  200                  205
Thr Lys Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys
    210                 215                 220
Lys Asn Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly
225                 230                 235                 240
Leu Trp Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile
            245                 250                 255
Arg Val Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile
            260                 265                 270
Asn Ser Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly
            275                 280                 285
Leu Thr Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile
    290                 295                 300
Ile Asp Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala
305                 310                 315                 320
Leu Ala Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu
            325                 330                 335
Ala Ala Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu
            340                 345                 350
Lys Tyr Thr Val Pro Gly Tyr Arg Asn Ser Leu Glu Phe Phe Thr Val
            355                 360                 365
Leu Ala Gln Arg Arg Gly Met His Gln Lys Gly Gly Ile Pro Asn Val
    370                 375                 380
Glu Gly Ala Ala Lys Leu Leu Trp Ser Glu Trp Thr Gly Ala Ser Leu
385                 390                 395                 400
Ala Tyr Tyr Cys His Pro Pro Thr Ser Trp Thr Pro Pro Pro Tyr Phe
            405                 410                 415
Asn Glu Ser Ile Val Val Asp Met Lys Ser Gly Phe Asn Leu Glu Glu
            420                 425                 430
Leu Glu Lys Asn Asn Ala Gln Ser Ile Arg Ala Ile Lys Gly Pro His
    435                 440                 445
Leu Ala Asn Ser Ile Leu Phe Gln Ser Ser Gly Leu Thr Asn Gly Ile
    450                 455                 460
Ile Glu Glu Lys Asp Ile His Glu Glu Leu Pro Lys Arg Lys Glu Arg
465                 470                 475                 480
Lys Gln Glu Glu Arg Glu Asp Asp Lys Asp Ser Asp Gln Glu Thr Val
            485                 490                 495
Asp Glu Glu Val Asp Glu Asn Ser Ser Gly Met Phe Ala Ala Glu Glu
            500                 505                 510
Thr Gly Glu Ala Leu Ser Glu Glu Thr Thr Ala Gly Glu Gln Ser Thr
    515                 520                 525
Arg Ser Phe Ile Leu Asp Lys Ile Ile Glu Glu Asp Asp Ala Tyr Asp
    530                 535                 540
Phe Ser Thr Asp Tyr Val
545                 550
```

```
<210> 6139
<211> 2249
<212> DNA
<213> Homo sapiens

<400> 6139
nncggccgca ggggccggcg ctgtcgcagc ccgtccgcct cgctcatggt acgggcgcca
60
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gcctcacccg cagaaaccac ctcacactga gcggcgccgg ctcagactcc acaggtcgtc
120

acagacgatg atggccaggc cccggaggct aaggacggca gctcctttag cggcagagtt
180

ttccgagtga ccttcttgat gctggctgtt tctctcaccg ttcccctgct tggagccatg
240

atgctgctgg aatctcctat agatccacag cctctcagct tcaaagaacc cccgctcttg
300

cttggtgttc tgcatccaaa tacgaagctg cgacaggcag aaaggctgtt tgaaaatcaa
360

cttgttggac cggagtccat agcacatatt ggggatgtga tgtttactgg gacagcagat
420

ggccgggtcg taaaacttga aaatggtgaa atagagacca ttgcccggtt tnggttcggg
480

cccnnttgca aaacccgaga tgatgagcct gtgtgtggga gacccctggg tatccgtgca
540

gggcccaatg ggactctctt tgtggccgat gcatacaagg gactatttga agtaaatccc
600

tggaaacgtg aagtgaaact gctgctgtcc tccgagacac ccattgaggg gaagaacatg
660

tcctttgtga atgatcttac agtcactcag gatgggagga agatttattt caccgattct
720

agcagcaaat ggcaaagacg agactacctg cttctggtga tggagggcac agatgacggg
780

cgcctgctgg agtatgatac tgtgaccagg gaagtaaaag ttttattgga ccagctgcgg
840

ttcccgaatg gagtccagct gtctcctgca gaagactttg tcctggtggc agaaacaacc
900

atggccagga tacgaagagt ctacgtttct ggcctgatga agggcggggc tgatctgttt
960

gtggagaaca tgcctggatt tccagacaac atccggccca gcagctctgg ggggtactgg
1020

gtgggcatgt cgaccatccg ccctaaccct gggtttttcca tgctggattt cttatctgag
1080

agaccctgga ttaaaaggat gattttttaag ggaagctgcg ctggttgtga tctgctcttt
1140

agtcaagaga cggtgatgaa gtttgtgccg cggtacagcc tcgtcctaga actcagcgac
1200

agcggtgcct tccggagaag cctgcatgat cccgatgggc tggtggccac ctacatcagc
1260

gaggtgcacg aacacgatgg gcacctgtac ctgggctctt tcaggtcccc cttcctctgc
1320

agactcagcc tccaggctgt ttagccctcc cagatagctg cccctgccac gcaggccagg
1380

agtcttcaca ctcaggcacc aggcctggtc caggaggagc tgtggacaca gtcgtggttc
1440

aagtgtccac atgcacctgt tagtccctga gaggtggtgg gaatggctgc ttcattcctc
1500

gaggatgccc gggccccacc tgggcttgtc tttctgttta gagggaagtg taacatatct
1560

gccatgagga acataaattc atgtaaagcc attttctctt aaacaaaaca aaactttcta
1620

agtacagtca ttctctagga tttgggaagc tccttgcact tggaacaggg ctcaggtggg
1680

```
tggagcagta aggcactacc cagagagctt gctgctgcgg ccctgtcctg cggcctcaaa
1740
gttcttcttt actatatata acgtgcggtc ataccttt ct tcgttgtggt ggggatggaa
1800
gagcagaggg agcatggccc aggggtgttg aggccagcgg tgagagccgt gttagccaag
1860
acatggaact gtgttctcaa gggttatgtg gggcgtgggc tctccatagt gtgtatgaaa
1920
agcttgttga ctctagcggc tcagagagga ctttgctggg tttctttctg tgaatatctc
1980
cgtgctgacc atgctggaat tggatgattc tgcaattcgg gacctactgc aggggtccgt
2040
ttagtaacgt cttgtctgtg atctttgttc ttgacctcta gaccccaaga tgtgaacagt
2100
gcacgtgtta atgtcatctt tgctcatgtg ttataagccc caagttgctg tatattttca
2160
caagtatgtc tacacactgg tcatgatttt gataataaat aacgataaat cgacttctgc
2220
tgattaacct ttaaaaaaaa aaaaaaaa
2249
```

```
<210> 6140
<211> 381
<212> PRT
<213> Homo sapiens
```

```
<400> 6140
Met Leu Ala Val Ser Leu Thr Val Pro Leu Leu Gly Ala Met Met Leu
1               5                   10                  15
Leu Glu Ser Pro Ile Asp Pro Gln Pro Leu Ser Phe Lys Glu Pro Pro
            20                  25                  30
Leu Leu Leu Gly Val Leu His Pro Asn Thr Lys Leu Arg Gln Ala Glu
        35                  40                  45
Arg Leu Phe Glu Asn Gln Leu Val Gly Pro Glu Ser Ile Ala His Ile
    50                  55                  60
Gly Asp Val Met Phe Thr Gly Thr Ala Asp Gly Arg Val Val Lys Leu
65                  70                  75                  80
Glu Asn Gly Glu Ile Glu Thr Ile Ala Arg Phe Xaa Phe Gly Pro Xaa
                85                  90                  95
Cys Lys Thr Arg Asp Asp Glu Pro Val Cys Gly Arg Pro Leu Gly Ile
            100                 105                 110
Arg Ala Gly Pro Asn Gly Thr Leu Phe Val Ala Asp Ala Tyr Lys Gly
        115                 120                 125
Leu Phe Glu Val Asn Pro Trp Lys Arg Glu Val Lys Leu Leu Leu Ser
    130                 135                 140
Ser Glu Thr Pro Ile Glu Gly Lys Asn Met Ser Phe Val Asn Asp Leu
145                 150                 155                 160
Thr Val Thr Gln Asp Gly Arg Lys Ile Tyr Phe Thr Asp Ser Ser Ser
                165                 170                 175
Lys Trp Gln Arg Arg Asp Tyr Leu Leu Leu Val Met Glu Gly Thr Asp
            180                 185                 190
Asp Gly Arg Leu Leu Glu Tyr Asp Thr Val Thr Arg Glu Val Lys Val
        195                 200                 205
Leu Leu Asp Gln Leu Arg Phe Pro Asn Gly Val Gln Leu Ser Pro Ala
```

5321

```
                 210                    215                   220
     Glu Asp Phe Val Leu Val Ala Glu Thr Thr Met Ala Arg Ile Arg Arg
     225                     230                   235                   240
     Val Tyr Val Ser Gly Leu Met Lys Gly Gly Ala Asp Leu Phe Val Glu
                     245                   250                   255
     Asn Met Pro Gly Phe Pro Asp Asn Ile Arg Pro Ser Ser Ser Gly Gly
                     260                   265                   270
     Tyr Trp Val Gly Met Ser Thr Ile Arg Pro Asn Pro Gly Phe Ser Met
                     275                   280                   285
     Leu Asp Phe Leu Ser Glu Arg Pro Trp Ile Lys Arg Met Ile Phe Lys
                     290                   295                   300
     Gly Ser Cys Ala Gly Cys Asp Leu Leu Phe Ser Gln Glu Thr Val Met
     305                     310                   315                   320
     Lys Phe Val Pro Arg Tyr Ser Leu Val Leu Glu Leu Ser Asp Ser Gly
                     325                   330                   335
     Ala Phe Arg Arg Ser Leu His Asp Pro Asp Gly Leu Val Ala Thr Tyr
                     340                   345                   350
     Ile Ser Glu Val His Glu His Asp Gly His Leu Tyr Leu Gly Ser Phe
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<210> 6141
<211> 5651
<212> DNA
<213> Homo sapiens

<400> 6141
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<210> 6142
<211> 513
<212> PRT
<213> Homo sapiens


<400> 6142
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Ala Ala Ala Ala Ala Ala Ala Gly Gly Gln Leu Leu Gly Asp Gly Gly
                 35                  40                  45
Ser Pro Gly Arg Thr Glu Gln Pro Pro Pro Ser Pro Gln Ser Ser Ser
     50                  55                  60
Gly Phe Leu Tyr Arg Arg Leu Lys Thr Gln Glu Lys Arg Glu Met Gln
65                  70                  75                  80
Lys Glu Ile Leu Ser Val Leu Gly Leu Pro His Arg Pro Arg Pro Leu
                 85                  90                  95
His Gly Leu Gln Gln Pro Gln Pro Pro Ala Leu Arg Gln Gln Glu Glu
                100                 105                 110
Gln Gln Gln Gln Gln Gln Leu Pro Arg Gly Glu Pro Pro Pro Gly Arg
                115                 120                 125
Leu Lys Ser Ala Pro Leu Phe Met Leu Asp Leu Tyr Asn Ala Leu Ser
          130                 135                 140
Ala Asp Asn Asp Glu Asp Gly Ala Ser Glu Gly Glu Arg Gln Gln Ser
145                 150                 155                 160
Trp Pro His Glu Ala Ala Ser Ser Ser Gln Arg Arg Gln Pro Pro Pro
                165                 170                 175
Gly Ala Ala His Pro Leu Asn Arg Lys Ser Leu Leu Ala Pro Gly Ser
                180                 185                 190
Gly Ser Gly Gly Ala Ser Pro Leu Thr Ser Ala Gln Asp Ser Ala Phe
          195                 200                 205
Leu Asn Asp Ala Asp Met Val Met Ser Phe Val Asn Leu Val Glu Tyr
     210                 215                 220
Asp Lys Glu Phe Ser Pro Arg Gln Arg His His Lys Glu Phe Lys Phe
225                 230                 235                 240
Asn Leu Ser Gln Ile Pro Glu Gly Gly Val Val Thr Ala Ala Glu Phe
                245                 250                 255
Arg Ile Tyr Lys Asp Cys Val Met Gly Ser Phe Lys Asn Gln Thr Phe
          260                 265                 270
Leu Ile Ser Ile Tyr Gln Val Leu Gln Glu His Gln His Arg Asp Ser
          275                 280                 285
Asp Leu Phe Leu Leu Asp Thr Arg Val Val Trp Ala Ser Glu Glu Gly
     290                 295                 300
Trp Leu Glu Phe Asp Ile Thr Ala Thr Ser Asn Leu Trp Val Val Thr
305                 310                 315                 320
Pro Gln His Asn Met Gly Leu Gln Leu Ser Val Val Thr Arg Asp Gly
                325                 330                 335
Val His Val His Pro Arg Ala Ala Gly Leu Val Gly Arg Asp Gly Pro
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Tyr Asp Lys Gln Pro Phe Met Val Ala Phe Phe Lys Val Ser Glu Val
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5326

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385              390                395                400
Ser Asp Tyr Asn Ser Ser Glu Leu Lys Thr Ala Cys Arg Lys His Glu
                 405                410                415
Leu Tyr Val Ser Phe Gln Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala
             420              425                430
Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly Glu Cys Ser Phe Pro
         435              440                445
Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val Gln Thr Leu
    450              455                460
Val His Leu Met Asn Pro Glu Tyr Val Pro Lys Pro Cys Cys Ala Pro
465              470                475                480
Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asn Asp Asn Ser Lys
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Ile Thr Leu Lys Lys Tyr Arg Asn Met Val Val Arg Ala Cys Gly Tyr
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<210> 6143
<211> 1137
<212> DNA
<213> Homo sapiens

<400> 6143
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780
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<210> 6144
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6144
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            20   25   30
Ser Gly Ser Arg Gln Ala Trp Val His Pro Pro Ala Gln Pro Arg Thr
            35   40   45
Ala Gly Pro Glu Leu Gly Gly Gln Gly Ile Pro Ser Pro Gly Cys Ala
        50   55   60
Cys Gln Arg Gly Glu Ala Gly Gly Gly Asn Ala Val Leu Pro Gln
65   70   75   80
Glu Ser Val Leu Arg Ala Ser Ala Val Gly Arg Gly Ala Glu Gly Pro
                85   90   95
Gly Ala Leu Thr Arg Ser Gly Ser Gly Ala Ala Ser Ala Leu Val Arg
            100   105   110
Pro Gly Glu Lys Gly Cys Trp Cys Arg Thr Ala Ser Gly Ala Gly Pro
            115   120   125
Ser Gly Asp Arg Gly Pro Glu Val Gln Val Pro Gly Gly
        130   135   140

<210> 6145
<211> 766
<212> DNA
<213> Homo sapiens

<400> 6145
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5328

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766

<210> 6146
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6146
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Ala Val Pro Thr Pro Glu Ala Gln Gln Gln Gln Val Lys Gln Pro Cys
            35   40   45
Gln Pro Pro Pro Val Lys Cys Gln Glu Thr Cys Ala Pro Lys Thr Lys
        50   55   60
Asp Pro Cys Ala Pro Gln Val Lys Lys Gln Cys Pro Pro Lys Asp Thr
65   70   75   80
Ile Ile Pro Ala Gln Gln Lys Cys Pro Ser Ala Gln Gln Ala Ser Lys
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Ser Lys Gln Lys
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<210> 6147
<211> 1852
<212> DNA
<213> Homo sapiens

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300

5329

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1852
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<210> 6148

<211> 410
<212> PRT
<213> Homo sapiens

<400> 6148

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			20				25					30			
Gly	Trp	Ile	Lys	Lys	Gly	Thr	Asp	Val	Asp	Val	Gly	Pro	Phe	Leu	Asn
		35				40					45				
Ser	Leu	Val	Gln	Glu	Gly	Glu	Trp	Glu	Arg	Ala	Ala	Ala	Val	Ala	Leu
	50				55				60						
Phe	Asn	Leu	Asp	Ile	Arg	Arg	Ala	Ile	Gln	Ile	Leu	Asn	Glu	Gly	Ala
65				70				75						80	
Ser	Ser	Glu	Lys	Gly	Asp	Leu	Asn	Leu	Asn	Val	Val	Ala	Met	Ala	Leu
			85					90					95		
Ser	Gly	Tyr	Thr	Asp	Glu	Lys	Asn	Ser	Leu	Trp	Arg	Glu	Met	Cys	Ser
			100					105				110			
Thr	Leu	Arg	Leu	Gln	Leu	Asn	Asn	Pro	Tyr	Leu	Cys	Val	Met	Phe	Ala
		115					120				125				
Phe	Leu	Thr	Ser	Glu	Thr	Gly	Ser	Tyr	Asp	Gly	Val	Leu	Tyr	Glu	Asn
	130					135				140					
Lys	Val	Ala	Val	Arg	Asp	Arg	Val	Ala	Phe	Ala	Cys	Lys	Phe	Leu	Ser
145				150				155						160	
Asp	Thr	Gln	Leu	Asn	Arg	Tyr	Ile	Glu	Lys	Leu	Thr	Asn	Glu	Met	Lys
			165				170					175			
Glu	Ala	Gly	Asn	Leu	Glu	Gly	Ile	Leu	Leu	Thr	Gly	Leu	Thr	Lys	Asp
		180					185				190				
Gly	Val	Asp	Leu	Met	Glu	Ser	Tyr	Val	Asp	Arg	Thr	Gly	Asp	Val	Gln
	195				200					205					
Thr	Ala	Ser	Tyr	Cys	Met	Leu	Gln	Gly	Ser	Pro	Leu	Asp	Val	Leu	Lys
	210				215				220						
Asp	Glu	Arg	Val	Gln	Tyr	Trp	Ile	Glu	Asn	Tyr	Arg	Asn	Leu	Leu	Asp
225				230				235						240	
Ala	Trp	Arg	Phe	Trp	His	Lys	Arg	Ala	Glu	Phe	Asp	Ile	His	Arg	Ser
			245				250				255				
Lys	Leu	Asp	Pro	Ser	Ser	Lys	Pro	Leu	Ala	Gln	Val	Phe	Val	Ser	Cys
			260				265				270				
Asn	Phe	Cys	Gly	Lys	Ser	Ile	Ser	Tyr	Ser	Cys	Ser	Ala	Val	Pro	His
		275				280				285					
Gln	Gly	Arg	Gly	Phe	Ser	Gln	Tyr	Gly	Val	Ser	Gly	Ser	Pro	Thr	Lys
	290				295				300						
Ser	Lys	Val	Thr	Ser	Cys	Pro	Gly	Cys	Arg	Lys	Pro	Leu	Pro	Arg	Cys
305				310				315						320	
Ala	Leu	Cys	Leu	Ile	Asn	Met	Gly	Thr	Pro	Val	Ser	Ser	Cys	Pro	Gly
			325				330				335				
Gly	Thr	Lys	Ser	Asp	Glu	Lys	Val	Asp	Leu	Ser	Lys	Asp	Lys	Lys	Leu
		340				345				350					
Ala	Gln	Phe	Asn	Asn	Trp	Phe	Thr	Trp	Cys	His	Asn	Cys	Arg	His	Gly
	355				360				365						
Gly	His	Ala	Gly	His	Met	Leu	Ser	Trp	Phe	Arg	Asp	His	Ala	Glu	Cys
	370				375				380						
Pro	Val	Ser	Ala	Cys	Thr	Cys	Lys	Cys	Met	Gln	Leu	Asp	Thr	Thr	Gly

```
385                 390            395                400
Asn Leu Val Pro Ala Glu Thr Val Gln Pro
                405                    410
```

<210> 6149
<211> 1949
<212> DNA
<213> Homo sapiens

<400> 6149

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nggccgcggg ctgcatgggc agcgcccgcg ccccgccgct gagccgtcgc ggagccgcgc
60
agccctcgga gcacgaatat atacagccct gctctgggac acacctccat tggatttaaa
120
agacagtcct cgtcagcact gactttcagc tatggaatcg cagacggttg atgatgaagc
180
gccggccgtg taaatgaaga tcgggtgagg agcaggacga tgcccaaggg tgggtgccct
240
aaagcaccac agcaggaaga gcttcccctc agcagcgaca tggtggagaa gcagactggg
300
aaaaaggata aagataaagt ttctctaacc aagaccccaa aactggagcg tggcgatggc
360
gggaaggagg tgagggagcg agccagcaag cggaagctgc ccttcaccgc gggcgccaat
420
ggggagcaga aggactcgga cacagagaag cagggccctg agcggaagag gattaagaag
480
gagcctgtca cccggaaggc cgggctgctg tttggcatgg ggctgtctgg aatccgagcc
540
ggctacccc tctccgagcg ccagcaggtg gcccttctca tgcagatgac ggccgaggag
600
tctgccaaca gcccagtgga cacaacacca aagcacccct cccagtctac agtgtgtcag
660
aagggaacgc ccaactctgc ctcaaaaacc aaagataaac tgaacaagag aaacgagcgt
720
ggagagaccc gcctgcaccg agccgccatc cgcggggacg cccggcgcat caaagagctc
780
atcagcgagg gggcagacgt caacgtcaag gacttcgcag ctggacggc gctgcacgag
840
gcctgtaacc ggggctacta cgacgtcgcg aagcagctgc tggctgcagg tgcggaggtg
900
aacaccaagg gcctagatga cgacacgcct ttgcacgacg ctgccaacaa cgggcactac
960
aaggtggtga agctgctgct gcggtacgga gggaacccgc agcagagcaa caggaaaggc
1020
gagacgccgc tgaaagtggc caactccccc acgatggtga acctcctgtt aggcaaaggc
1080
acttacactt ccagcgagga gagctcgacg gagagctcag aagaggaaga cgcaccatcc
1140
ttcgcacctt ccagttcagt cgacggcaac aacacggact ccgagttcga aaaaggcctc
1200
aagcacaagg ccaagaaccc agagccacag aaggccacgg cccccgtcaa ggacgagtat
1260
gagtttgatg aggacgacga gcaggacagg gttcctccgg tggacgacaa gcacctattg
1320
```

aaaaaggact acagaaaaga aacgaaatcc aatagtttta tctctatacc caaaatggag
1380
gttaaaagtt acactaaaaa taacacgatt gcaccaaaga aagcgtccca tcgtatcctg
1440
tcagacacgt cggacgagga ggacgcgagt gtcaccgtgg ggacaggaga gaagctgaga
1500
ctctcggcac atacgatatt gcctggtagt aagacacgag agccttctaa tgccaagcag
1560
cagaaggaaa aaaataaagt gaaaaagaag cgaaagaaag aaacaaaagg cagagaggtt
1620
cgcttcggaa agcggagcna tagttctgct cctcggagtc ggagagcgag tcctcagaga
1680
gtggggagga tgacagggac tctctgggga gctctggctg cctcaagggg tccccgctgg
1740
tgctgaagga cccctccctg ttcagctccc tctctgcctc ctccacctcg tctcacggga
1800
gctctgccgc ccagaagcag aaccccagcc acacagacca gcacaccaag cactggcgga
1860
cagacaattg gaaaaccatt tcttccccgg cttggtcaga ggtcagttct ttatcagact
1920
ccacaaggac gagactgaca agcgagtct
1949

<210> 6150
<211> 508
<212> PRT
<213> Homo sapiens

<400> 6150
Met Pro Lys Gly Gly Cys Pro Lys Ala Pro Gln Gln Glu Glu Leu Pro
1   5   10   15
Leu Ser Ser Asp Met Val Glu Lys Gln Thr Gly Lys Lys Asp Lys Asp
            20   25   30
Lys Val Ser Leu Thr Lys Thr Pro Lys Leu Glu Arg Gly Asp Gly Gly
        35   40   45
Lys Glu Val Arg Glu Arg Ala Ser Lys Arg Lys Leu Pro Phe Thr Ala
    50   55   60
Gly Ala Asn Gly Glu Gln Lys Asp Ser Asp Thr Glu Lys Gln Gly Pro
65   70   75   80
Glu Arg Lys Arg Ile Lys Lys Glu Pro Val Thr Arg Lys Ala Gly Leu
                85   90   95
Leu Phe Gly Met Gly Leu Ser Gly Ile Arg Ala Gly Tyr Pro Leu Ser
            100   105   110
Glu Arg Gln Gln Val Ala Leu Leu Met Gln Met Thr Ala Glu Glu Ser
        115   120   125
Ala Asn Ser Pro Val Asp Thr Thr Pro Lys His Pro Ser Gln Ser Thr
    130   135   140
Val Cys Gln Lys Gly Thr Pro Asn Ser Ala Ser Lys Thr Lys Asp Lys
145   150   155   160
Leu Asn Lys Arg Asn Glu Arg Gly Glu Thr Arg Leu His Arg Ala Ala
                165   170   175
Ile Arg Gly Asp Ala Arg Arg Ile Lys Glu Leu Ile Ser Glu Gly Ala
            180   185   190
Asp Val Asn Val Lys Asp Phe Ala Gly Trp Thr Ala Leu His Glu Ala

```
                195                    200                    205
Cys Asn Arg Gly Tyr Tyr Asp Val Ala Lys Gln Leu Leu Ala Ala Gly
        210                    215                    220
Ala Glu Val Asn Thr Lys Gly Leu Asp Asp Asp Thr Pro Leu His Asp
225                    230                    235                    240
Ala Ala Asn Asn Gly His Tyr Lys Val Val Lys Leu Leu Leu Arg Tyr
                245                    250                    255
Gly Gly Asn Pro Gln Gln Ser Asn Arg Lys Gly Glu Thr Pro Leu Lys
                260                    265                    270
Val Ala Asn Ser Pro Thr Met Val Asn Leu Leu Leu Gly Lys Gly Thr
                275                    280                    285
Tyr Thr Ser Ser Glu Glu Ser Ser Thr Glu Ser Ser Glu Glu Glu Asp
                290                    295                    300
Ala Pro Ser Phe Ala Pro Ser Ser Ser Val Asp Gly Asn Asn Thr Asp
305                    310                    315                    320
Ser Glu Phe Glu Lys Gly Leu Lys His Lys Ala Lys Asn Pro Glu Pro
                325                    330                    335
Gln Lys Ala Thr Ala Pro Val Lys Asp Glu Tyr Glu Phe Asp Glu Asp
                340                    345                    350
Asp Glu Gln Asp Arg Val Pro Pro Val Asp Asp Lys His Leu Leu Lys
                355                    360                    365
Lys Asp Tyr Arg Lys Glu Thr Lys Ser Asn Ser Phe Ile Ser Ile Pro
        370                    375                    380
Lys Met Glu Val Lys Ser Tyr Thr Lys Asn Asn Thr Ile Ala Pro Lys
385                    390                    395                    400
Lys Ala Ser His Arg Ile Leu Ser Asp Thr Ser Asp Glu Glu Asp Ala
                405                    410                    415
Ser Val Thr Val Gly Thr Gly Glu Lys Leu Arg Leu Ser Ala His Thr
        420                    425                    430
Ile Leu Pro Gly Ser Lys Thr Arg Glu Pro Ser Asn Ala Lys Gln Gln
        435                    440                    445
Lys Glu Lys Asn Lys Val Lys Lys Lys Arg Lys Lys Glu Thr Lys Gly
        450                    455                    460
Arg Glu Val Arg Phe Gly Lys Arg Ser Xaa Ser Ser Ala Pro Arg Ser
465                    470                    475                    480
Arg Arg Ala Ser Pro Gln Arg Val Gly Arg Met Thr Gly Thr Leu Trp
                485                    490                    495
Gly Ala Leu Ala Ala Ser Arg Gly Pro Arg Trp Cys
                500                    505
```

```
<210> 6151
<211> 648
<212> DNA
<213> Homo sapiens

<400> 6151
tttttttttt tttttttttga agggtgagaa atttattcag atttcttcat aattcccccc
60
aaaagctcca accacgttgc cagtccttgg gtgctgcagt tggtcgggga gaggggctgt
120
gtggaggtca ccttctggta gacggagacc cgcttttcag actctgtggc gcagcaggcg
180
ggccaggaac atttgggcca ctattgctct tagccctgcc gcgcctgact ttctctcctc
240
```

```
tactttcctt ccgaccgtag ggacaagtgt ggggatccgc tttgggctcc aaggccctgc
300
ccgcactggc agcaccaagc gggtgtagaa tgactggaag gagcagggaa ggaagatggg
360
tgtcaactgt cccggccagt ggctgcgtgc atgtgtgtgt gaacagggaa aaggccaccc
420
tctcccatgt ttctcccgtc tcctcggttc tcctcggaga cccgcagggc tgcccgaggt
480
agctccgagt tgccctgggt cgctggggct tggtccgcat cctcctccgc tagtccgctc
540
ccgcgttcca cagcgccccg ccgctcggtg tgcacgcact gcggcttaac ccagccgaca
600
aggcacgctt gccaaagagg cgcgggtgtg tgtgtgcggg gtccgcgg
648
```

```
<210> 6152
<211> 130
<212> PRT
<213> Homo sapiens

<400> 6152
Met Arg Thr Lys Pro Gln Arg Pro Arg Ala Thr Arg Ser Tyr Leu Gly
1               5                   10                  15
Gln Pro Cys Gly Ser Pro Arg Arg Thr Glu Glu Thr Gly Glu Thr Trp
            20                  25                  30
Glu Arg Val Ala Phe Ser Leu Phe Thr His Thr Cys Thr Gln Pro Leu
        35                  40                  45
Ala Gly Thr Val Asp Thr His Leu Pro Ser Leu Leu Leu Pro Val Ile
        50                  55                  60
Leu His Pro Leu Gly Ala Ala Ser Ala Gly Arg Ala Leu Glu Pro Lys
65                  70                  75                  80
Ala Asp Pro His Thr Cys Pro Tyr Gly Arg Lys Glu Ser Arg Gly Glu
                85                  90                  95
Lys Val Arg Arg Gly Arg Ala Lys Ser Asn Ser Gly Pro Asn Val Pro
            100                 105                 110
Gly Pro Pro Ala Ala Pro Gln Ser Leu Lys Ser Gly Ser Pro Ser Thr
            115                 120                 125
Arg Arg
    130
```

```
<210> 6153
<211> 1810
<212> DNA
<213> Homo sapiens

<400> 6153
gatgcagtta cctgtgtgga cttcagtatc aacacaaagc agctggccag tggtnccatg
60
gactcatgcc tcatggtctg gcacatgaag ctgcagtcac gcgcctaccg cttcactggc
120
cacaaggatg ccgtcacctg tgtgaacttc tctccttcgg acacctgct tgcttccggc
180
tcccgagaca agactgtccg catctgggta cccaatgtca aggtgagtc cactgtgttt
240
```

```
cgtgcacaca cagccacagt gaggagtgtc cacttctgca gtgatggcca gtccttcgtg
300
acagcctctg acgacaagac agtcaaagtg tgggcaactc atcgccagaa attcctgttc
360
tccctgagcc agcatatcaa ctgggtccgc tgtgccaagt ctcccccga cgggcggctc
420
atcgtgtctg ccagtgatga caagactgtt aagctgtggg acaagagcag ccgggaatgt
480
gtccactcgt attgtgagca tggcggcttt gtcacctatg tggacttcca ccccagtggg
540
acgtgcattg ccgctgccgg catggacaac acagtgaagg tgtgggacgt gcggactcac
600
cggctgctgc agcattatca gttgcacagt gcagcagtga cgggctctc tttccacccg
660
tcgggaaact acctgatcac agcctccagt gactcaaccc tgaagatcct ggacctgatg
720
gagggccggc tgctctacac actccacggg catcagggac agccaccac tgttgccttt
780
tcaagaacgg gggagtattt tgcttctgga ggctctgatg aacaagtgat ggtttggaag
840
agtaactttg atattgttga tcatggagaa gtcacgaaag tgccgaggcc cccagccaca
900
ctggccagct ccatggggaa tctgccagaa gtggacttcc ctgtccccc aggcagaggc
960
tggagtgtgg agtctgtgca gagccagccc caggagcccg tgagtgtgcc ccagacactg
1020
actagcacgc tggagcacat tgtgggccag ctggatgtcc tcactcagac agtctccatt
1080
ctggagcagc ggttgacact gacagaagac aagctgaagc agtgtctgga gaaccagcag
1140
ctaatcatgc agagagcaac accatgatca ggggagcagg aatcaggagc tcggtggatt
1200
tgcaggtggc aggccaggga tttgtaccat gggacttggg taaataaagg ggactgaact
1260
ctgtgggaat cacatccata ctggagccct ggatttttgc agttctgccc tccaccttgc
1320
tatctgcacc aggaggctct ccacctggca gccagaggtc cccagtgggc cgggctcaca
1380
cacaaatgat gcttcagacc cgaatgagag gaccacattt tgcttaatgt aaaggagcca
1440
cttgaaaatg tctgctcctt cggggtcctg agattgtggc tccccctctg gaggaggtgg
1500
ctccacgatg ccttgatttt cactcatcat ttggacatgt gactggcttt tcctacctct
1560
gccatggtgt agaaattgat tgcacattga ttggatgagc cgggggtttt ctctaaatct
1620
gactaaaggc ccaaagtggg cccatctgag tcaggtttgt tgagaacaag ccctctcaag
1680
tgggtggtgg cttttcagtg ccctgatttc tgttccaca cgtgttcact ggagccaggt
1740
gacttcctcc ttgcgtgagt gagggcacag gaatctcaaa attaaacctg acttcattgc
1800
aaaaaaaaaa
1810
```

<210> 6154
<211> 388
<212> PRT
<213> Homo sapiens

<400> 6154
Asp Ala Val Thr Cys Val Asp Phe Ser Ile Asn Thr Lys Gln Leu Ala
 1   5   10   15
Ser Gly Xaa Met Asp Ser Cys Leu Met Val Trp His Met Lys Leu Gln
            20   25   30
Ser Arg Ala Tyr Arg Phe Thr Gly His Lys Asp Ala Val Thr Cys Val
        35   40   45
Asn Phe Ser Pro Ser Gly His Leu Leu Ala Ser Gly Ser Arg Asp Lys
    50   55   60
Thr Val Arg Ile Trp Val Pro Asn Val Lys Gly Glu Ser Thr Val Phe
65   70   75   80
Arg Ala His Thr Ala Thr Val Arg Ser Val His Phe Cys Ser Asp Gly
            85   90   95
Gln Ser Phe Val Thr Ala Ser Asp Asp Lys Thr Val Lys Val Trp Ala
            100   105   110
Thr His Arg Gln Lys Phe Leu Phe Ser Leu Ser Gln His Ile Asn Trp
        115   120   125
Val Arg Cys Ala Lys Phe Ser Pro Asp Gly Arg Leu Ile Val Ser Ala
    130   135   140
Ser Asp Asp Lys Thr Val Lys Leu Trp Asp Lys Ser Ser Arg Glu Cys
145   150   155   160
Val His Ser Tyr Cys Glu His Gly Gly Phe Val Thr Tyr Val Asp Phe
                165   170   175
His Pro Ser Gly Thr Cys Ile Ala Ala Ala Gly Met Asp Asn Thr Val
            180   185   190
Lys Val Trp Asp Val Arg Thr His Arg Leu Leu Gln His Tyr Gln Leu
            195   200   205
His Ser Ala Ala Val Asn Gly Leu Ser Phe His Pro Ser Gly Asn Tyr
    210   215   220
Leu Ile Thr Ala Ser Ser Asp Ser Thr Leu Lys Ile Leu Asp Leu Met
225   230   235   240
Glu Gly Arg Leu Leu Tyr Thr Leu His Gly His Gln Gly Pro Ala Thr
                245   250   255
Thr Val Ala Phe Ser Arg Thr Gly Glu Tyr Phe Ala Ser Gly Gly Ser
                260   265   270
Asp Glu Gln Val Met Val Trp Lys Ser Asn Phe Asp Ile Val Asp His
    275   280   285
Gly Glu Val Thr Lys Val Pro Arg Pro Pro Ala Thr Leu Ala Ser Ser
    290   295   300
Met Gly Asn Leu Pro Glu Val Asp Phe Pro Val Pro Pro Gly Arg Gly
305   310   315   320
Trp Ser Val Glu Ser Val Gln Ser Gln Pro Gln Glu Pro Val Ser Val
                325   330   335
Pro Gln Thr Leu Thr Ser Thr Leu Glu His Ile Val Gly Gln Leu Asp
            340   345   350
Val Leu Thr Gln Thr Val Ser Ile Leu Glu Gln Arg Leu Thr Leu Thr
            355   360   365
Glu Asp Lys Leu Lys Gln Cys Leu Glu Asn Gln Gln Leu Ile Met Gln

```
        370                    375                    380
    Arg Ala Thr Pro
    385


    <210> 6155
    <211> 995
    <212> DNA
    <213> Homo sapiens


    <400> 6155
    aacagccaca gacgtatgtg taatatgatg ggctttagaa tgtacctgca aagcagtttt
    60
    ttttttttt ccatttggag gaaaaaagat gaaccaaaaa agactgaatt gggatgctaa
    120
    aataacagcg atttattatt aaggaaatga tacgcttttg tcccattcaa ataatgtttt
    180
    tattcccctt ttctttattc ttgggaggtt cctattgttg tgccaggtcg ttttcactga
    240
    acgatttta aaggtattca ccagtcccac gtgtgaccgg ttgcatttt actgtgcagg
    300
    accatcgtga agcctgtggc caaagagttt gatccagaca tggtcttagt atctgctgga
    360
    tttgatgcat tggaaggcca caccctcct ctaggagggt acaaagtgac ggcaaaatgt
    420
    tttggtcatt tgacgaagca attgatgaca ttggctgatg gacgtgtggt gttggctcta
    480
    gaaggaggac atgatctcac agccatctgt gatgcatcag aagcctgtgt aaatgccctt
    540
    ctaggaaatg agctggagcc acttgcagaa gatattctcc accaaagccc gaatatgaat
    600
    gctgttattt ctttacagaa gatcattgaa attcaaaaac tgctggtgag cctatggaag
    660
    aggagccagc cttgtgaagt gccaagtccc cctctgatat ttcctgtgtg tgacatcatt
    720
    gtgtatcccc ccaccccagt accctcagac atgtcttgtc tgctgcctgg gtggcacaga
    780
    ttcaatggaa cataaacact gggcacaaaa ttctgaacag cagcttcact tgttctttgg
    840
    atggacttga aagggcatta aagattcctt aaacgtaacc gctgtgattc tagagttaca
    900
    gtaaaccacg attggaagaa actgcttcca gcatgctttt aatatgctgg gtgacccact
    960
    cctagacacc aagtttgaac tagaaacatt cagta
    995


    <210> 6156
    <211> 164
    <212> PRT
    <213> Homo sapiens


    <400> 6156
    Thr Ile Val Lys Pro Val Ala Lys Glu Phe Asp Pro Asp Met Val Leu
    1               5                   10                  15
    Val Ser Ala Gly Phe Asp Ala Leu Glu Gly His Thr Pro Pro Leu Gly
```

```
              20                   25                   30
Gly Tyr Lys Val Thr Ala Lys Cys Phe Gly His Leu Thr Lys Gln Leu
          35                   40                   45
Met Thr Leu Ala Asp Gly Arg Val Val Leu Ala Leu Glu Gly Gly His
      50                   55                   60
Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Asn Ala Leu
65                   70                   75                   80
Leu Gly Asn Glu Leu Glu Pro Leu Ala Glu Asp Ile Leu His Gln Ser
              85                   90                   95
Pro Asn Met Asn Ala Val Ile Ser Leu Gln Lys Ile Ile Glu Ile Gln
          100                  105                  110
Lys Leu Leu Val Ser Leu Trp Lys Arg Ser Gln Pro Cys Glu Val Pro
      115                  120                  125
Ser Pro Pro Leu Ile Phe Pro Val Cys Asp Ile Ile Val Tyr Pro Pro
      130                  135                  140
Thr Pro Val Pro Ser Asp Met Ser Cys Leu Leu Pro Gly Trp His Arg
145                  150                  155                  160
Phe Asn Gly Thr
```

```
<210> 6157
<211> 2135
<212> DNA
<213> Homo sapiens
```

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<400> 6157
natttcattt tatcccaact acttttgagg taggtattat cctgttttac aaacgaagaa
60
actaaggctc agtgagatta atgatccaag gtcatataat ctaagtggta gagctgggat
120
ttgaacttca gtttgactaa ctatgaaact tttaactgct attctttctc aactttcctt
180
ttttctgcag gatctggcga catggccaga aaggctctca gcttgcttc gtggaccagc
240
atggctcttg ctgcctctgg catctacttc tacagtaaca agtacttgga ccctaatgac
300
tttggcgctg tcagggtggg cagagcagtt gctacgacgg ctgtcatcag ttacgactac
360
ctcacttccc tgaagagtgt cccttatggc tcagaggagt acttgcagct gagatctaag
420
atccatgatt tgttccagag cttcgatgac acccctctgg gacggcctc cctggcccag
480
gtccacaagg cagtgctgca tgatgggcgg acggtggccg tgaaggtcca gcacccaaag
540
gtgcgggctc agagctcgaa ggacattctc ctgatggagg tgctcgttct ggctgtgaag
600
cagctgttcc cagagtttga gtttatgt_g cttgtggatg aagccaagaa gaacctgcct
660
ttggagctgg atttcctcaa tgaagggagg aatgctgaga aggtgtccca gatgctcagg
720
catttgact tcttgaaggt cccccgaatc cactgggacc tgtccacgga gcgggtcctc
780
ctgatggagt ttgtggatgg cgggcaggtc aatgacagag actacatgga gaggaacaag
840
```

atcgacgtca atgagatctc acgccacctg ggcaagatgt atagtgagat gatcttcgtc
900
aatggcttcg tgcactgcga tccccacccc ggcaacgtac tggtgcggaa gcaccccggc
960
acgggaaagg cggagattgt cctgttggac catgggcttt accagatgct cacggaagaa
1020
ttccgcctga attactgcca cctctggcag tctctgatct ggactgacat gaagagagtg
1080
aaggagtaca gccagcgact gggagccggg gatctctacc ccttgtttgc ctgcatgctg
1140
acggcgcgat cgtgggactc ggtcaacaga ggcatcagcc aagctcccgt cactgccact
1200
gaggacttag agattcgcaa caacgcggcc aactacctcc cccagatcag ccatctcctc
1260
aaccacgtgc cgcgccagat gctgctcatc ttgaagacca cgacctgct gcgtggcatt
1320
gaggccgccc tgggcacccg cgccagcgcc agctcctttc tcaacatgtc acgttgctgc
1380
atcagagcgc tagctgagca caagaagaag aatacctgtt cattcttcag aaggacccag
1440
atctctttca gcgaggcctt caacttatgg cagatcaacc tccatgagct catcctgcgt
1500
gtgaaggggt tgaagctggc tgaccgggtc ttggccctaa tatgctggct gttccctgct
1560
ccactctgag tggaattgct ctccctgccc cattctggtg tctttccact cctcagcccc
1620
tcatcttgcc tccacccagc tgctccattt ttgccacatc gtggcccgca gccccagagt
1680
cactgtccat gtcaccatcc ttctcctcct ttggaatcct ctccgcacac tgtggccctt
1740
gtctcagggc ccacaagctg aactgtggca tagctctctc ttcttctcca agaagactca
1800
gcagcctaca ttcccattcc tggtatgtgc cattgggttg gatgtcccca ctacttccgt
1860
taacccttcc cattgtcaag atgtgccacg ggtgccactg ggggcacact gaacttgtag
1920
ggagtgtgat tttgttggag gtgcacatgg tctctgaatt tgacagagaa caccttccct
1980
ttccttgcca tgtcaccctc cagaggaagt cacacctcag cgaggtggtt tggcatctgg
2040
ggccaactcc attacagcta tgagctcact gctgtcagtg acgtttggtg ttttctgtac
2100
tgtgtttcaa taaaaactcc ttcaaggttg aaaaa
2135

<210> 6158
<211> 455
<212> PRT
<213> Homo sapiens

<400> 6158
Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser Met Ala Leu
 1   5   10   15
Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu Asp Pro Asn

5340

```
                    20                      25                      30
Asp Phe Gly Ala Val Arg Val Gly Arg Ala Val Ala Thr Thr Ala Val
            35                      40                      45
Ile Ser Tyr Asp Tyr Leu Thr Ser Leu Lys Ser Val Pro Tyr Gly Ser
        50                      55                      60
Glu Glu Tyr Leu Gln Leu Arg Ser Lys Ile His Asp Leu Phe Gln Ser
65                      70                      75                      80
Phe Asp Asp Thr Pro Leu Gly Thr Ala Ser Leu Ala Gln Val His Lys
                85                      90                      95
Ala Val Leu His Asp Gly Arg Thr Val Ala Val Lys Val Gln His Pro
                100                     105                     110
Lys Val Arg Ala Gln Ser Ser Lys Asp Ile Leu Leu Met Glu Val Leu
            115                     120                     125
Val Leu Ala Val Lys Gln Leu Phe Pro Glu Phe Glu Phe Met Trp Leu
        130                     135                     140
Val Asp Glu Ala Lys Lys Asn Leu Pro Leu Glu Leu Asp Phe Leu Asn
145                     150                     155                     160
Glu Gly Arg Asn Ala Glu Lys Val Ser Gln Met Leu Arg His Phe Asp
                165                     170                     175
Phe Leu Lys Val Pro Arg Ile His Trp Asp Leu Ser Thr Glu Arg Val
                180                     185                     190
Leu Leu Met Glu Phe Val Asp Gly Gly Gln Val Asn Asp Arg Asp Tyr
            195                     200                     205
Met Glu Arg Asn Lys Ile Asp Val Asn Glu Ile Ser Arg His Leu Gly
        210                     215                     220
Lys Met Tyr Ser Glu Met Ile Phe Val Asn Gly Phe Val His Cys Asp
225                     230                     235                     240
Pro His Pro Gly Asn Val Leu Val Arg Lys His Pro Gly Thr Gly Lys
                245                     250                     255
Ala Glu Ile Val Leu Leu Asp His Gly Leu Tyr Gln Met Leu Thr Glu
                260                     265                     270
Glu Phe Arg Leu Asn Tyr Cys His Leu Trp Gln Ser Leu Ile Trp Thr
                275                     280                     285
Asp Met Lys Arg Val Lys Glu Tyr Ser Gln Arg Leu Gly Ala Gly Asp
            290                     295                     300
Leu Tyr Pro Leu Phe Ala Cys Met Leu Thr Ala Arg Ser Trp Asp Ser
305                     310                     315                     320
Val Asn Arg Gly Ile Ser Gln Ala Pro Val Thr Ala Thr Glu Asp Leu
                325                     330                     335
Glu Ile Arg Asn Asn Ala Ala Asn Tyr Leu Pro Gln Ile Ser His Leu
            340                     345                     350
Leu Asn His Val Pro Arg Gln Met Leu Leu Ile Leu Lys Thr Asn Asp
            355                     360                     365
Leu Leu Arg Gly Ile Glu Ala Ala Leu Gly Thr Arg Ala Ser Ala Ser
        370                     375                     380
Ser Phe Leu Asn Met Ser Arg Cys Cys Ile Arg Ala Leu Ala Glu His
385                     390                     395                     400
Lys Lys Lys Asn Thr Cys Ser Phe Phe Arg Arg Thr Gln Ile Ser Phe
                405                     410                     415
Ser Glu Ala Phe Asn Leu Trp Gln Ile Asn Leu His Glu Leu Ile Leu
                420                     425                     430
Arg Val Lys Gly Leu Lys Leu Ala Asp Arg Val Leu Ala Leu Ile Cys
            435                     440                     445
Trp Leu Phe Pro Ala Pro Leu
```

5341

450   455

<210> 6159
<211> 4310
<212> DNA
<213> Homo sapiens

<400> 6159
ctcgaggtgc gcgccggccc ggactcggcg ggcatcgccc tctacagcca tgaagatgtg
60
tgtgtcttta agtgctcagt gtcccgagag acagagtgca gccgtgtggg caagcagtcc
120
ttcatcatca ccctgggctg caacagcgtc ctcatccagt tcgccacacc caacgatttc
180
tgttccttct acaacatcct gaaaacctgc cggggccaca ccctggagcg gtctgtgttc
240
agcgagcgga cggaggagtc ttctgccgtg cagtacttcc agttttatgg ctacctgtcc
300
cagcagcaga acatgatgca ggactacgtg cggacaggca cctaccagcg cgccatcctg
360
caaaaccaca ccgacttcaa ggacaagatc gttcttgatg ttggctgtgg ctctgggatc
420
ctgtcgtttt ttgccgccca agctggagca cggaaaatct acgcggtgga ggccagcacc
480
atggcccagc acgctgaggt cttggtgaag agtaacaacc tgacggaccg catcgtggtc
540
atcccgggca aggtggagga ggtgtcactc cccgagcagg tggacatcat catctcggag
600
cccatgggct acatgctctt caacgagcgc atgctggaga gctacctcca cgccaagaag
660
tacctgaagc ccagcggaaa catgtttcct accattggtg acgtccacct tgcacccttc
720
acggatgaac agctctacat ggagcagttc accaaggcca acttctggta ccagccatct
780
ttccatggag tggacctgtc ggccctccga ggtgccgcgg tggatgagta tttccggcag
840
cctgtggtgg acacatttga catccggatc ctgatggcca agtctgtcaa gtacacggtg
900
aacttcttag aagccaaaga aggagatttg cacaggatag aaatcccatt caaattccac
960
atgctgcatt cagggctggt ccacggcctg gctttctggt ttgacgttgc tttcatcggc
1020
tccataatga ccgtgtggct gtccacagcc ccgacagagc ccctgaccca ctggtaccag
1080
gtgcggtgcc tgttccagtc accactgttc gccaaggcag gggacacgct ctcagggaca
1140
tgtctgctta ttgccaacaa aagacagagc tacgacatca gtattgtggc ccaggtggac
1200
cagaccggct ccaagtccag taacctcctg gatctgaaaa accccttctt tagatacacg
1260
ggcacaacgc cctcaccccc acccggctcc cactacacat ctccctcgga aaacatgtgg
1320
aacacgggca gcacctacaa cctcagcagc gggatggccg tggcagggat gccgaccgcc
1380

5342

```
tatgacttga gcagtgttat tgccagtggc tccagcgtgg gccacaacaa cctgattcct
1440
ttagccaaca cggggattgt caatcacacc cactcccgga tgggctccat aatgagcacg
1500
gggattgtcc aagggtcctc cggcgcccag ggcagtggtg gtggcagcac gagtgcccac
1560
tatgcagtca acagccagtt caccatgggc ggccccgcca tctccatggc gtcgcccatg
1620
tccatcccga ccaacaccat gcactacggg agctaggggc ccgccccgcg gactgacagc
1680
accaggaaac caaatgatgt ccctgcccgc cgcccccgcc gggcggcttt ccccccttgta
1740
ctggagaagc tcgaacaccc ggtcacagct ctctttgcta tgggaactgg gacactcttt
1800
tacacgatgt tgccgccgtc cccaccctaa cccccacctc ccggccctga gcgtgtgtcg
1860
ctgccatatt ttacacaaaa tcatgttgtg ggagccctcg tcccccctcc tgcccgctct
1920
accctgacct gggcttgtca tctgctggaa caggcgccat ggggcctgcc agccctgcct
1980
gccaggtccc ttagcacctg tcccccctgcc tgtctccagt gggaaggtag cctggccagg
2040
cggggcctcc ccttcgacga ccaggcctcg gtcacaacgg acgtgacatg ctgctttttt
2100
taattttatt tttttatgaa aagaaccagt gtcaatccgc agaccctctg tgaagccagg
2160
ccggccgggc cgagccagca gcccctctcc ctagactcag aggcgccgcg gggaggggtg
2220
gccccgccga ggcttcaggg gccccctccc caccaaaggg ttcacctcac acttgaatgt
2280
acaacccacc ccactgtcgg gaaggcctcc gtcctcggcc cctgcctctt gctgctgtcc
2340
tgtccccgag cccctgcagg tccccccccg cccccccact caagagttag agcaggtggc
2400
tgcaggcctt gggcccggag ggaaggccac tgccggccac ttggggcaga cacagacacc
2460
tcaaggatct gtcacggaag gcgtcctttt tccttgtagc taacgttagg cctgagtagc
2520
tcccctccat ccttgtagac gctccagtcc ctactactgt gacggcattt ccatccctcc
2580
cctgcccggg aagggacctt gcagggacct ctccctccaa aaaaagaaaa aagaaaaag
2640
aaagaaaaaa taaatgagga aacgtgttgc agcacaggca gttttcttct ccttctgctc
2700
ccctgtttct catacccca aactcagatg ctggagctca ggcccgccgt gtgtgcaccc
2760
aggcaggagc gggcgctgtc caggctgggc cgcccccttg gctctccctc ctgttccagg
2820
ggagccatag gagggaaagc aggtggcccg ggggggatat gggggcccca gccctgtccc
2880
aaagctccct gctcggctgc ccctcgcccg cctttatata aattctctga atcacctttg
2940
catagaaaat aaaagtgttt gctttgtaag aaaagtctgg aaagtagcag aatcatctca
3000
```

```
aggtgtcaaa ggagccttca gtcatcgtct gggggcagg acaggcagag gggttggtcc
3060
acttaggtgt tgcctgaaag aaagaattgt ctgtgggacc cgggccttcc taggaggggg
3120
ccagggactg cggcaaggta ggggacagcg cgatgtttga gggcagagat gtgatttggg
3180
gtggaggagc cacgttctcc ggaggcagcg actggaagaa gtacaactta cagcccatgg
3240
ccaggagggc gtggagcagc acgaccacgg acagcagcac tgtggccacc agcctggtgt
3300
cctcacggac cacgggccag agggtgaata ccagcccggc ggctgacagg cccagggcca
3360
gcgcccaaa gagccactgc agccaaggca cagggatgag ccacaggacc accatgggga
3420
tgaagacaaa gagggagtag ccgtagatgc acacagtctc caggaaggtg tagggcccca
3480
tgcgctcctg gacacccttg cgccaccgca ggaagcccca cagggccagg ggcaccagcc
3540
acgcatagca gtagatgctg atgcctgcca cggtcacctt gtggaactgg gggctgtagt
3600
ggatggaggg gtccctcctc tgggccagca ccagcgtcag gttgccagtg acggccagga
3660
caaaggccaa cgtggcacag atccagaagg ggccatacag atccggccga ttccgcagat
3720
ggtgccgcac aaagttgtgg ccaggccggg gcagcagtga gcctttgatc cggtccagga
3780
cctgtgaggt gtccacgtca aagaagctct gatagtagct gaaggtccag aatcccggct
3840
gctgctgctg ctgctgctcc tgcaggagcg cggccttgtc actctcctcc tccacctcat
3900
cctcggctcc atagctgcca cctgagccca cggccacagc cacgtgccct tgtggggtca
3960
gctgatcgct tctgctggtg gtggctgcat ctggggtgtc agccagaaga ttagtggcct
4020
cctcgaattc atggaaggtc agctcgtcgg ccgatgccat ggtcgttcag gggcgtctcc
4080
gcatccctcg ctggcgacca actgcaccca cggaggcttg aactcgtcgt cccgtcccca
4140
caggtgcgct ccgccccccc tcacctgagg ccacctgggc cggcgtggct ggggctcatc
4200
cctgtgcctt ggctgcagtg gctctttggg gcgctggccc tgggcctgtc agccgccggg
4260
ctggtattca ccctctggcc cgtggtccgt gaggacacca ggctggtggc
4310
```

```
<210> 6160
<211> 551
<212> PRT
<213> Homo sapiens
```

```
<400> 6160
Leu Glu Val Arg Ala Gly Pro Asp Ser Ala Gly Ile Ala Leu Tyr Ser
1               5                   10                  15
His Glu Asp Val Cys Val Phe Lys Cys Ser Val Ser Arg Glu Thr Glu
```

5344

```
                    20                      25                      30
      Cys Ser Arg Val Gly Lys Gln Ser Phe Ile Ile Thr Leu Gly Cys Asn
              35                      40                      45
      Ser Val Leu Ile Gln Phe Ala Thr Pro Asn Asp Phe Cys Ser Phe Tyr
          50                      55                      60
      Asn Ile Leu Lys Thr Cys Arg Gly His Thr Leu Glu Arg Ser Val Phe
      65                      70                      75                  80
      Ser Glu Arg Thr Glu Glu Ser Ser Ala Val Gln Tyr Phe Gln Phe Tyr
                      85                      90                      95
      Gly Tyr Leu Ser Gln Gln Gln Asn Met Met Gln Asp Tyr Val Arg Thr
                  100                     105                     110
      Gly Thr Tyr Gln Arg Ala Ile Leu Gln Asn His Thr Asp Phe Lys Asp
              115                     120                     125
      Lys Ile Val Leu Asp Val Gly Cys Gly Ser Gly Ile Leu Ser Phe Phe
          130                     135                     140
      Ala Ala Gln Ala Gly Ala Arg Lys Ile Tyr Ala Val Glu Ala Ser Thr
      145                     150                     155                 160
      Met Ala Gln His Ala Glu Val Leu Val Lys Ser Asn Asn Leu Thr Asp
                  165                     170                     175
      Arg Ile Val Val Ile Pro Gly Lys Val Glu Glu Val Ser Leu Pro Glu
                  180                     185                     190
      Gln Val Asp Ile Ile Ile Ser Glu Pro Met Gly Tyr Met Leu Phe Asn
              195                     200                     205
      Glu Arg Met Leu Glu Ser Tyr Leu His Ala Lys Lys Tyr Leu Lys Pro
          210                     215                     220
      Ser Gly Asn Met Phe Pro Thr Ile Gly Asp Val His Leu Ala Pro Phe
      225                     230                     235                 240
      Thr Asp Glu Gln Leu Tyr Met Glu Gln Phe Thr Lys Ala Asn Phe Trp
                  245                     250                     255
      Tyr Gln Pro Ser Phe His Gly Val Asp Leu Ser Ala Leu Arg Gly Ala
                  260                     265                     270
      Ala Val Asp Glu Tyr Phe Arg Gln Pro Val Val Asp Thr Phe Asp Ile
                  275                     280                     285
      Arg Ile Leu Met Ala Lys Ser Val Lys Tyr Thr Val Asn Phe Leu Glu
          290                     295                     300
      Ala Lys Glu Gly Asp Leu His Arg Ile Glu Ile Pro Phe Lys Phe His
      305                     310                     315                 320
      Met Leu His Ser Gly Leu Val His Gly Leu Ala Phe Trp Phe Asp Val
                  325                     330                     335
      Ala Phe Ile Gly Ser Ile Met Thr Val Trp Leu Ser Thr Ala Pro Thr
                  340                     345                     350
      Glu Pro Leu Thr His Trp Tyr Gln Val Arg Cys Leu Phe Gln Ser Pro
              355                     360                     365
      Leu Phe Ala Lys Ala Gly Asp Thr Leu Ser Gly Thr Cys Leu Leu Ile
          370                     375                     380
      Ala Asn Lys Arg Gln Ser Tyr Asp Ile Ser Ile Val Ala Gln Val Asp
      385                     390                     395                 400
      Gln Thr Gly Ser Lys Ser Ser Asn Leu Leu Asp Leu Lys Asn Pro Phe
                  405                     410                     415
      Phe Arg Tyr Thr Gly Thr Thr Pro Ser Pro Pro Pro Gly Ser His Tyr
                  420                     425                     430
      Thr Ser Pro Ser Glu Asn Met Trp Asn Thr Gly Ser Thr Tyr Asn Leu
              435                     440                     445
      Ser Ser Gly Met Ala Val Ala Gly Met Pro Thr Ala Tyr Asp Leu Ser
```

```
      450                       455                       460
Ser Val Ile Ala Ser Gly Ser Ser Val Gly His Asn Asn Leu Ile Pro
465                       470                       475                       480
Leu Ala Asn Thr Gly Ile Val Asn His Thr His Ser Arg Met Gly Ser
                    485                       490                       495
Ile Met Ser Thr Gly Ile Val Gln Gly Ser Ser Gly Ala Gln Gly Ser
                    500                       505                       510
Gly Gly Gly Ser Thr Ser Ala His Tyr Ala Val Asn Ser Gln Phe Thr
            515                       520                       525
Met Gly Gly Pro Ala Ile Ser Met Ala Ser Pro Met Ser Ile Pro Thr
        530                       535                       540
Asn Thr Met His Tyr Gly Ser
545                       550
```

```
<210> 6161
<211> 1489
<212> DNA
<213> Homo sapiens
```

```
<400> 6161
ggctgcatga tcttcagcag attcagtaca gagggaagtg agctgtggga gaggaaggag
60
gatgggggaa atggcaagaa aaggagcacc ctgcttagaa agggaacgga gccgggtgtg
120
gtggctcacg cctgcaatcc anacaccttg ggaggccgaa gcaaggagat cacctgagcc
180
caagagtttg agaccaccca catagcaaga ccccatctct attttttgga aaaaaaaaa
240
aaaagcagca accagcagga tgggtggaaa aaagttgctg aaggctcttc aagatcctct
300
ctgcctgctc cttctctcac agagggacag gggagggtga tgagtcagtg gactgaatgt
360
ccccatgggg atgaaggatg gttggggtca gggtcctaga gggagggctg gaaggaggga
420
aggagatggc cagagaagga tgtaggacac agaggtgccg ccgtggatca ccaagaggtt
480
caggactggc cagaggaagg agaggagatc aaggcaagca tgaggcactt gggagatgca
540
tctgtgcctg cacacagctg aaatccccag gaaataagac gggagcaggg tgggtttctg
600
cagccgaggt gagaccaaag tgccagctca ctgccaccct cagtaaagac taacttgccc
660
ttccccacaa ctcccctccc agaagtagct tgctctcctc tgcctgccac acatcggggg
720
gctcagggaa agctcccct ccctggacag ctagtgttcc ctaggccaag gccagtccct
780
gcagagatga ggagctggga aatcccctcc tcccatcccg cacgtccacg cgtgccagat
840
cctgtgctgc gggcttttca cacacagcct cttagacgct tagcctgtga ggcgggtgct
900
gttgtccttc cttcccattt tgcaactgag caaacagcct gaaagagaca aaaaccaggt
960
agttagcatg accccaaagc cactccctgg tctacgctgt tctgcagcct gagcctgggg
1020
```

```
tggccaggtg gggttgtgca gtgagggggg gaaggagaat agcccccaaa aatgctgccg
1080
gaatggtaaa gggcctggac tgcaaagcta gtgacttgag ctttattttg tggcactgga
1140
ggttttccca gtcattgtaa tgatacaatc agatttgcgt tgtcttcaag ttaccatggt
1200
aaccgtactt ccacccacca agagtggatt ggagaaggca aaactagggc agagaagcca
1260
gggagtgttg agaaggtctg aacccagaca gtgggcagct gggccccaag acggatgggg
1320
gactccagaa gcgtggagct ggcagagaga aacctgcccg gggcatcaga gaaaagggcg
1380
actgtgcagg aacagagtag atgaggtggg gaacctttgg gtaagaagag ctgaatcagg
1440
agcattgagg cagcggtttt caaacctcag aagcaacagc agggccggc
1489
```

```
<210> 6162
<211> 58
<212> PRT
<213> Homo sapiens
```

```
<400> 6162
Gly Cys Met Ile Phe Ser Arg Phe Ser Thr Glu Gly Ser Glu Leu Trp
1               5                   10                  15
Glu Arg Lys Glu Asp Gly Gly Asn Gly Lys Lys Arg Ser Thr Leu Leu
            20                  25                  30
Arg Lys Gly Thr Glu Pro Gly Val Val Ala His Ala Cys Asn Pro Xaa
        35                  40                  45
Thr Leu Gly Gly Arg Ser Lys Glu Ile Thr
    50                  55
```

```
<210> 6163
<211> 713
<212> DNA
<213> Homo sapiens
```

```
<400> 6163
gtggaaatga gcctctcatt aaaacacgtg ctttctggga gccgtgatga acgtgagtgt
60
gagatgagtc cagctgcggt cagagccatg ggatgtgggt cactgtgacc cagtgggtca
120
caggtgctga gcaaggaagg gctgggaggc tcaagcaaaa tctacaagaa aaatctaaag
180
gggcccagcc tctgccagga aaagcaggcc tggctctgct gaaaccccaa tcacgctctg
240
atggataccg gtacctgggc aaggatacc; tggatggact tgattcttct ctcctgaaat
300
gtacgagaag gtgcatgcgg ggatttcggc tgcctgaaaa gcaaccctct aaaacccgag
360
tgtcattttt agaatcaaaa aggaaggaag gcagtggctg ctgcactgg tcagtatcga
420
gatctggagc ttttcgcctt aaggtcactg tttaaaactc tgccctgggt cagttgtaac
480
```

agaaagtcac aactccctca caggcatcag ggtgcaactt tgaatgccaa gaggggctgt
540

gtctgttggt taccacgcgg cgagctcccg ggacacctcc tgacacctcc tgacagtgtc
600

tctttctcta ggagtctcct ctcttcccac ccaccatggc ggcctggcct ggaggggagg
660

cattggggac tgagtccttc cccgacaggg agtctctctc ccccctggcg cgc
713

<210> 6164
<211> 120
<212> PRT
<213> Homo sapiens

<400> 6164
Met Trp Val Thr Val Thr Gln Trp Val Thr Gly Ala Glu Gln Gly Arg
 1   5   10   15
Ala Gly Arg Leu Lys Gln Asn Leu Gln Glu Lys Ser Lys Gly Ala Gln
            20   25   30
Pro Leu Pro Gly Lys Ala Gly Leu Ala Leu Leu Lys Pro Gln Ser Arg
        35   40   45
Ser Asp Gly Tyr Arg Tyr Leu Gly Lys Asp Thr Val Asp Gly Leu Asp
    50   55   60
Ser Ser Leu Leu Lys Cys Thr Arg Arg Cys Met Arg Gly Phe Arg Leu
65   70   75   80
Pro Glu Lys Gln Pro Ser Lys Thr Arg Val Ser Phe Leu Glu Ser Lys
                85   90   95
Arg Lys Glu Gly Ser Gly Trp Leu His Trp Ser Val Thr Arg Ser Gly
            100   105   110
Ala Phe Arg Leu Lys Val Thr Val
            115   120

<210> 6165
<211> 1004
<212> DNA
<213> Homo sapiens

<400> 6165
cccagccgga tcgggcggcg aaggccggcg cggcgagcag caaccatgtc ggtgttcggg
60

aagctgttcg gggctggagg gggtaaggcc ggcaagggcg cccgacccc ccaggaggcc
120

atccagcggc tgcgggacac ggaagagatg ttaagcaaga aacaggagtt cctggagaag
180

aaaatcgagc aggagctgac ggccgccaag aagcacggca ccaaaaacaa gcgcgcggcc
240

ctccaggcac tgaagcgtaa gaagaggtat gagaagcagc tggcgcagat cgacggcaca
300

ttatcaacca tcgagttcca gcgggaggcc ctggagaatg ccaacaccaa caccgaggtg
360

ctcaagaaca tgggctatgc cgccaaggcc atgaaggcgg cccatgacaa catggacatc
420

gataaagttg atgagttaat gcaggacatt gctgaccagc aagaacttgc agaggagatt
480

5348

```
tcaacagcaa tttcgaaacc tgtagggttt ggagaagagt ttgacgagga tgagctcatg
540
gcggaattag aagaactaga acaggaggaa ctagacaaga atttgctgga aatcagtgga
600
cccgaaacag tccctctacc aaatgttccc tctatagccc taccatcaaa acccgccaag
660
aagaaagaag aggaggacga cgacatgaag gaattggaga actgggctgg atccatgtaa
720
tggggtccag cgctggctgg gcccagacag actgtggtgg cctgcgcagc gagcaggcgt
780
gtgcgtgtgt ggggcaggca ggatgtggtg caggcaggtt ccatcgcttt cgactctcac
840
tccaaagcag tagggccgcg ttgctgctca ctctctgcat agcatggtct gcacctggga
900
gttggccggg gggaggggga cgagcgggct ggcacgtgcc tgctgtttat aatgttgaat
960
ttctgtaaaa taaactgtat ttgcaaatcc aaaaaaaaaa aaaa
1004
```

```
<210> 6166
<211> 239
<212> PRT
<213> Homo sapiens
```

```
<400> 6166
Pro Ser Arg Ile Gly Arg Arg Arg Pro Ala Arg Arg Ala Ala Thr Met
1               5               10              15
Ser Val Phe Gly Lys Leu Phe Gly Ala Gly Gly Gly Lys Ala Gly Lys
            20              25              30
Gly Gly Pro Thr Pro Gln Glu Ala Ile Gln Arg Leu Arg Asp Thr Glu
        35              40              45
Glu Met Leu Ser Lys Lys Gln Glu Phe Leu Glu Lys Lys Ile Glu Gln
    50              55              60
Glu Leu Thr Ala Ala Lys Lys His Gly Thr Lys Asn Lys Arg Ala Ala
65              70              75              80
Leu Gln Ala Leu Lys Arg Lys Lys Arg Tyr Glu Lys Gln Leu Ala Gln
                85              90              95
Ile Asp Gly Thr Leu Ser Thr Ile Glu Phe Gln Arg Glu Ala Leu Glu
            100             105             110
Asn Ala Asn Thr Asn Thr Glu Val Leu Lys Asn Met Gly Tyr Ala Ala
        115             120             125
Lys Ala Met Lys Ala Ala His Asp Asn Met Asp Ile Asp Lys Val Asp
    130             135             140
Glu Leu Met Gln Asp Ile Ala Asp Gln Gln Glu Leu Ala Glu Glu Ile
145             150             155             160
Ser Thr Ala Ile Ser Lys Pro Val Gly Phe Gly Glu Glu Phe Asp Glu
                165             170             175
Asp Glu Leu Met Ala Glu Leu Glu Glu Leu Glu Gln Glu Glu Leu Asp
            180             185             190
Lys Asn Leu Leu Glu Ile Ser Gly Pro Glu Thr Val Pro Leu Pro Asn
            195             200             205
Val Pro Ser Ile Ala Leu Pro Ser Lys Pro Ala Lys Lys Lys Glu Glu
    210             215             220
Glu Asp Asp Asp Met Lys Glu Leu Glu Asn Trp Ala Gly Ser Met
```

5349

225   230   235

<210> 6167
<211> 1220
<212> DNA
<213> Homo sapiens

<400> 6167
ngccatacag catttagtt ttgttctttc cattaactga agtcacgagg tatgcctcct
60
tggaaactcc aacagttaag agattctcat gtattccatg aaataaaaag caaagaaaaa
120
tcaaacttgt cttaatgaga tggaagtgtt ggatcaaaca ctgattgagc tgttctatgt
180
cctccacttc cccagtgcct tctctcctcc cgggtctgcg cggacgcggc ctccttacct
240
catttgtcct cgcccctccc cgtccctcta cgcgttttgg tccctgtttg gtgctttctg
300
tttgcagcta cggcagtgag tatgtatgtg acggaccccg agtcacccgc ggcctgggac
360
ccctgcctac cctccgtctc gccagccgag ctgtggaact agcgcgtgcc ccctcgccga
420
cctcggcgtc tccggtccgc ccctcacttg tggtggggcg cagctcctgg tccctcagct
480
gcgcgccgcc ccacgcggcc gggctgcggg tctaggggt ccgcatctcc ctggctttcc
540
aagggctaag gtcgtgattc tagggcggct gggcgtccag ggcctcggtg ggggtggcgt
600
gtctgccctt tttatctccc cgcaaggccc ccagtcttct agggaagcca gtcagtgaag
660
cgcggaggtc cgggcgcgcc gagagagagt ccagtctttg aggaccgagt agtcctgggc
720
cacctcccgc ctctgctgtc agaagcagca gctgccgccg tggaatccaa aatttcggga
780
gctgtgaccc tttcctcatg taaaacgagt agtcttggac gatctgggca taggaaccaa
840
tcagaaacaa tcgcttcagc aatcaagacc attgttcatc atggaggaac ccatggatac
900
ctctgagcct ctatctgcat taccattcac tgggcagcag tcttttgagc caagtggcaa
960
atttggacag tatccatcga tgcagatgaa ccacatccag gcactgggga agtggaggac
1020
atagaacagc tcaatcagtg tttgatccaa cacttccatc tcattaagac aagtttgatt
1080
tttctttgct ttttatttca tggaatacat gagaatctct taactgttgg agtttccaag
1140
gaggcatacc tcatgacttc agttaatgga aagaacaaaa ctaaaatgct gtatggccaa
1200
agccacaaag ggaaggatcc
1220

<210> 6168
<211> 90
<212> PRT

<213> Homo sapiens

<400> 6168
Ala Lys Trp Gln Ile Trp Thr Val Ser Ile Asp Ala Asp Glu Pro His
1   5   10   15
Pro Gly Thr Gly Glu Val Glu Asp Ile Glu Gln Leu Asn Gln Cys Leu
            20   25   30
Ile Gln His Phe His Leu Ile Lys Thr Ser Leu Ile Phe Leu Cys Phe
        35   40   45
Leu Phe His Gly Ile His Glu Asn Leu Leu Thr Val Gly Val Ser Lys
    50   55   60
Glu Ala Tyr Leu Met Thr Ser Val Asn Gly Lys Asn Lys Thr Lys Met
65   70   75   80
Leu Tyr Gly Gln Ser His Lys Gly Lys Asp
                85   90

<210> 6169
<211> 720
<212> DNA
<213> Homo sapiens

<400> 6169
tgagggcttc gatcccttct ctgatttgct gtcagccatg aacggatgga tgtgatgcct
60
gctagccaaa aggcttccct ctgtgtgttg cagtcctgtg gcattatgca tgccccctcc
120
cagtgacccc aggctttta tggctgtgaa acacgttaaa atttcagggt aagacgtgac
180
cttttgaggt gactataact gaagattgct ttacagaagc ccaaaaaggt tttttgagtc
240
atgatgcaag aatctgggac tgagacaaaa agtaacggtt cagccatcca gaatgggtcg
300
ggcggcagca accacttact agagtgcggc ggtcttcggg aggggcggtc caacggagag
360
acgccggccg tggacatcgg ggcagctgac ctcgcccacg cccagcagca gcagcaacag
420
tggcatctca taaaccatca gccctctagg agtcccagca gttggcttaa gagactaatt
480
tcaagccctt gggagttgga agtcctgcag gtcccttgtg gggagcagtt gctgagacga
540
agatgagtgg acctgtgtgt cagcctaacc cttccccatt ttgaataaaa ttattctttg
600
gagaaatggt tcccactgct ttcatgcaaa aataaaaatt aaacgaaaaa cagcttaagc
660
ctgtgaagaa ggaaatactg agctagccag caaaagagag aaagaagagg aggggagagg
720

<210> 6170
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6170
Met Met Gln Glu Ser Gly Thr Glu Thr Lys Ser Asn Gly Ser Ala Ile

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    1                5                    10                   15
  Gln Asn Gly Ser Gly Gly Ser Asn His Leu Leu Glu Cys Gly Gly Leu
                20                   25                   30
  Arg Glu Gly Arg Ser Asn Gly Glu Thr Pro Ala Val Asp Ile Gly Ala
           35                   40                   45
  Ala Asp Leu Ala His Ala Gln Gln Gln Gln Gln Gln Trp His Leu Ile
      50                   55                   60
  Asn His Gln Pro Ser Arg Ser Pro Ser Ser Trp Leu Lys Arg Leu Ile
  65                   70                   75                   80
  Ser Ser Pro Trp Glu Leu Glu Val Leu Gln Val Pro Cys Gly Glu Gln
                85                   90                   95
  Leu Leu Arg Arg Arg
                100
```

<210> 6171
<211> 1130
<212> DNA
<213> Homo sapiens

<400> 6171
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nncccgctag gagttcctag taaagtggcg ggagccgcag ctatggagcc gcaggaggag
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agagaaacgc aggttgctgc gtggttaaaa aaaatatttg gagatcatcc tattccacag
120
tatgaggtga acccacggac cacagagatt ttacatcacc tttcagaacg caacagggtc
180
cgggacaggg atgtctacct ggtaatagag gacttgaagc agaaagcaag tgaatacgag
240
tcagaagcca agtatcttca agaccttctc atggagagtg tgaatttttc ccccgccaat
300
ctctctagca ctggttccag gtatctgaat gctttggttg acagtgcggt ggcccttgaa
360
acaaaggata cctcgctagc tagtttatc cctgcagtga tgatttgac ctctgatctc
420
tttcgtacca aatccaaaag tgaagaaatc aagattgaac tggaaaaact tgaaaaaaat
480
ttaactgcaa ctttagtatt agaaaaatgt ctacaagagg atgtcaagaa agcagagttg
540
catctgtcta cagaaagggc caaagttgat aatcgtcgtc agaacatgga ctttctaaaa
600
gcaaagtcag aggaattcag atttggaatc aaggctgcag aggagcaact ttcagccaga
660
ggcatggatg cttctctgtc tcatcagtcc ttagtagcac tatcagagaa actggcaaga
720
ttaaagcaac agactatacc tttgaagaaa aaattggagt cctatttaga cttaatgccg
780
aatccgtctc ttgctcaagt gaaaattgaa gaagcaaagc gagaactaga tagcattgaa
840
gctgaactta caagaagagt agacatgatg gaactgtgac aaaagccaaa taaacatcct
900
tttccctaac aaagtaaatt gaataggact ttacagagtt cttttcctc ttggcatttc
960
ctaataacaa aactttctgt gttcttagat tacagaatat cataattgat agaatatggt
1020
```

ttcttactgt gtgttgcatt tttgtgccca aatacatagt tttcatatta aaaagccttt
1080
tctcttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1130

<210> 6172
<211> 292
<212> PRT
<213> Homo sapiens

<400> 6172
Xaa Pro Leu Gly Val Pro Ser Lys Val Ala Gly Ala Ala Ala Met Glu
 1   5   10   15
Pro Gln Glu Glu Arg Glu Thr Gln Val Ala Ala Trp Leu Lys Lys Ile
            20   25   30
Phe Gly Asp His Pro Ile Pro Gln Tyr Glu Val Asn Pro Arg Thr Thr
        35   40   45
Glu Ile Leu His His Leu Ser Glu Arg Asn Arg Val Arg Asp Arg Asp
    50   55   60
Val Tyr Leu Val Ile Glu Asp Leu Lys Gln Lys Ala Ser Glu Tyr Glu
65   70   75   80
Ser Glu Ala Lys Tyr Leu Gln Asp Leu Leu Met Glu Ser Val Asn Phe
                85   90   95
Ser Pro Ala Asn Leu Ser Ser Thr Gly Ser Arg Tyr Leu Asn Ala Leu
            100   105   110
Val Asp Ser Ala Val Ala Leu Glu Thr Lys Asp Thr Ser Leu Ala Ser
            115   120   125
Phe Ile Pro Ala Val Asn Asp Leu Thr Ser Asp Leu Phe Arg Thr Lys
        130   135   140
Ser Lys Ser Glu Glu Ile Lys Ile Glu Leu Glu Lys Leu Glu Lys Asn
145   150   155   160
Leu Thr Ala Thr Leu Val Leu Glu Lys Cys Leu Gln Glu Asp Val Lys
                165   170   175
Lys Ala Glu Leu His Leu Ser Thr Glu Arg Ala Lys Val Asp Asn Arg
            180   185   190
Arg Gln Asn Met Asp Phe Leu Lys Ala Lys Ser Glu Glu Phe Arg Phe
        195   200   205
Gly Ile Lys Ala Ala Glu Glu Gln Leu Ser Ala Arg Gly Met Asp Ala
        210   215   220
Ser Leu Ser His Gln Ser Leu Val Ala Leu Ser Glu Lys Leu Ala Arg
225   230   235   240
Leu Lys Gln Gln Thr Ile Pro Leu Lys Lys Lys Leu Glu Ser Tyr Leu
                245   250   255
Asp Leu Met Pro Asn Pro Ser Leu Ala Gln Val Lys Ile Glu Glu Ala
            260   265   270
Lys Arg Glu Leu Asp Ser Ile Glu Ala Glu Leu Thr Arg Arg Val Asp
        275   280   285
Met Met Glu Leu
    290

<210> 6173
<211> 1483
<212> DNA
<213> Homo sapiens

<400> 6173

agagagagag actagttctc tcttactcta ggcctttcgg tttgcgcgac ggggcaggaa
60

agcgtgcgtg cggctaagag agtgggcgct ctcgcggcgc tgacgatgga agaactggag
120

caaggcctgt tgatgcagcc atgggcgtgg ctacagcttg cagagaactc cctcttggcc
180

aaggtttta tcaccaagca gggctatgcc ttgttggttt cagatcttca acaggtgtgg
240

catgaacagg tggacactag tgtggtcagc cagcgagcca aggagctgaa caagcggctc
300

actgctcctc ctgcagcttt cctctgtcat ttggataatc tccttcgccc attgttgaag
360

gacgctgctc accctagcga agctaccttc tcctgtgatt gtgtggcaga tgcactgatt
420

ctacgggtgc gaagtgagct ctctggcctc cccttctatt ggaatttcca ctgcatgcta
480

gctagtcctt ccctggtctc ccaacatttg attcgtcctc tgatgggcat gagtctggca
540

ttacagtgcc aagtgaggga gctagcaacg ttacttcata tgaaagacct agagatccaa
600

gactaccagg agagtggggc tacgctgatt cgagatcgat tgaagacaga accatttgaa
660

gaaaattcct tcttggaaca atttatgata gagaaactgc cagaggcatg cagcattggt
720

gatggaaagc cctttgtcat gaatctgcag gatctgtata tggcagtcac cacacaagag
780

gtccaagtgg gacagaagca tcaaggcgct ggagatcctc atacctcaaa cagtgcttcc
840

ctgcaaggaa tcgatagcca atgtgtaaac cagccagaac aactggtctc ctcagcccca
900

accctctcag cacctgagaa agagtccacg ggtacttcag gccctctgca gagacctcag
960

ctgtcaaagg tcaagaggaa gaatccaagg ggtctcttca gttaatctgt tgtggcctca
1020

gctgctgagg atggacttgg agaatagctt ccaagcttca ccttgaaaga agcttacatg
1080

gcagcaatat ttctaaaata gtgatacagt cagaggcctc ctgtaagggc gagagaactg
1140

aagttgatgt tgacaggccc acaggaatt ggccttccct gttcaagtgg aagccagtct
1200

ctgagaatcc cgtgctctcc tctcttttgg tggaggttct gtaggttcag gtttctacca
1260

tggactttag gtatataggg caagtcagca agaaagcacc acacactcag gaagccttgt
1320

ctacctttcc ctagcgtctc tagccagcca gccccagata tcctcagag acccacttct
1380

ctcttttgca tggaataaaa agcactcaca gtccctgctt ttgggattaa aaaacaaaaa
1440

gaaaaaaaaa aaaaaaaaa aaaaaaaat cctcatgccg aat
1483

<210> 6174

5354

<211> 299
<212> PRT
<213> Homo sapiens

<400> 6174
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Met Glu Glu Leu Glu Gln Gly Leu Leu Met Gln Pro Trp Ala Trp Leu
1               5                   10                  15
Gln Leu Ala Glu Asn Ser Leu Leu Ala Lys Val Phe Ile Thr Lys Gln
            20                  25                  30
Gly Tyr Ala Leu Leu Val Ser Asp Leu Gln Gln Val Trp His Glu Gln
        35                  40                  45
Val Asp Thr Ser Val Val Ser Gln Arg Ala Lys Glu Leu Asn Lys Arg
    50                  55                  60
Leu Thr Ala Pro Pro Ala Ala Phe Leu Cys His Leu Asp Asn Leu Leu
65              70                  75                  80
Arg Pro Leu Leu Lys Asp Ala Ala His Pro Ser Glu Ala Thr Phe Ser
                85                  90                  95
Cys Asp Cys Val Ala Asp Ala Leu Ile Leu Arg Val Arg Ser Glu Leu
            100                 105                 110
Ser Gly Leu Pro Phe Tyr Trp Asn Phe His Cys Met Leu Ala Ser Pro
        115                 120                 125
Ser Leu Val Ser Gln His Leu Ile Arg Pro Leu Met Gly Met Ser Leu
    130                 135                 140
Ala Leu Gln Cys Gln Val Arg Glu Leu Ala Thr Leu Leu His Met Lys
145                 150                 155                 160
Asp Leu Glu Ile Gln Asp Tyr Gln Glu Ser Gly Ala Thr Leu Ile Arg
                165                 170                 175
Asp Arg Leu Lys Thr Glu Pro Phe Glu Glu Asn Ser Phe Leu Glu Gln
            180                 185                 190
Phe Met Ile Glu Lys Leu Pro Glu Ala Cys Ser Ile Gly Asp Gly Lys
        195                 200                 205
Pro Phe Val Met Asn Leu Gln Asp Leu Tyr Met Ala Val Thr Thr Gln
    210                 215                 220
Glu Val Gln Val Gly Gln Lys His Gln Gly Ala Gly Asp Pro His Thr
225                 230                 235                 240
Ser Asn Ser Ala Ser Leu Gln Gly Ile Asp Ser Gln Cys Val Asn Gln
                245                 250                 255
Pro Glu Gln Leu Val Ser Ser Ala Pro Thr Leu Ser Ala Pro Glu Lys
            260                 265                 270
Glu Ser Thr Gly Thr Ser Gly Pro Leu Gln Arg Pro Gln Leu Ser Lys
        275                 280                 285
Val Lys Arg Lys Asn Pro Arg Gly Leu Phe Ser
    290                 295
```

<210> 6175
<211> 349
<212> DNA
<213> Homo sapiens

<400> 6175
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acgcgtttgc cgggagatgc ggccgcttcg tcctctgcag ttaagaagct gggcgcgtcg
60
aggactggga tttcaaatat gcgtgcatta gagaatgact ttttcaattc tcccccaaga
120
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aaaactgttc agtttggtgg aactgtgaca gaagtcttgc tgaagtacaa aaagggtgaa
180
acaaatgact ttgagttgtt gaagaaccag ctgttagatc cagacataaa gagattgcct
240
tggttgaata gaagtcaaac agtagtggaa gagtatttgg cttttcttgg taatcttgta
300
tcagcacaga ctgttttcct cagaccgtgt ctcagcatga ttgcttccc
349

<210> 6176
<211> 90
<212> PRT
<213> Homo sapiens

<400> 6176

Met	Arg	Ala	Leu	Glu	Asn	Asp	Phe	Phe	Asn	Ser	Pro	Pro	Arg	Lys	Thr
1				5					10				15		
Val	Gln	Phe	Gly	Gly	Thr	Val	Thr	Glu	Val	Leu	Leu	Lys	Tyr	Lys	Lys
			20				25					30			
Gly	Glu	Thr	Asn	Asp	Phe	Glu	Leu	Leu	Lys	Asn	Gln	Leu	Leu	Asp	Pro
		35				40				45					
Asp	Ile	Lys	Arg	Leu	Pro	Trp	Leu	Asn	Arg	Ser	Gln	Thr	Val	Val	Glu
	50				55				60						
Glu	Tyr	Leu	Ala	Phe	Leu	Gly	Asn	Leu	Val	Ser	Ala	Gln	Thr	Val	Phe
65				70				75							80
Leu	Arg	Pro	Cys	Leu	Ser	Met	Ile	Ala	Ser						
				85				90							

<210> 6177
<211> 1536
<212> DNA
<213> Homo sapiens

<400> 6177
cggcccaacc atggcgtcct ccgcggccgg ctgcgtggtg atcgttggca gaattaaaac
60
tctgtaccca ttgaacaaca gctgctcatt tcccccagcc ccagcccctg gcatccaccc
120
ttctagcttt ctgtctctat gggtacctca gtggagtcat tgggcgaatg ggccatgctg
180
tttgccagtg gaggcttcca ggtgaaactc tatgacattg agcaacagca gataaggaac
240
gccctggaaa acatcagaaa ggagatgaag ttgctggagc aggcaggttc tctgaaaggc
300
tccctgagtg tggaagagca gctgtcactc atcagtggtt gtcccaatat ccaagaagca
360
gtagagggtg ccatgcacat tcaggaatgt gttccagaag atctagaact gaagaagaag
420
atttttgctc agttagattc catcattgat gatcgagtga tcttaagcag ttccacttct
480
tgtctcatgc cttccaagtt gtttgctggc ttggtccatg tgaagcaatg catcgtggct
540
catcctgtga atccgccata ctacatcccg ctggttgagc tggtccccca cccggagacg
600

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gccctacga cagtggacag aacccacgcc ctgatgaaga agattgganc agtgccccat
660
gcgagtccag aaggaggtgg ccggcttcgt tctgaaccgc ctgcaatatg caatcatcag
720
cgaggcctgg cggctagtgg aggaaggaat ncgtgtctcc tagtgacctg gnaccttgtc
780
atgtcagaag ggttgggcat gcggtatgca ttcattggac ccctggaaac catgcatctc
840
aatgcagaag gtatgttaag ctactgcgac agatacagcg aaggcataaa acatgtccta
900
cagactttg gacccattcc agagtttcc agggccactg ctgagaaggt taaccaggac
960
atgtgcatga aggtccctga tgacccggag cacttagctg ccaggaggca gtggagggac
1020
gagtgcctca tgagactcgc caagttgaag agtcaagtgc agccccagtg aatttcttgt
1080
aatgcagctt ccactcctct cattggaggc cctatttggg aacactgcaa gcccttaatc
1140
agccctctgt gacataggta gcagcccacg gagatcctaa gctggctgtc ttgtgtgcag
1200
cctgagtggg gtggtgcagg ccggtagtct gcccgtcact ttggatcata gccctgggcc
1260
tggcggcaca gcagcacttg cgttctcggg gctgtcgatt tcctgccacc tgggcagata
1320
acctggagat ttccaccttt tcttttcagc ttgattgcat ttgactatat tttacagcca
1380
gtgattgtag tttcatgtta atatgtggca aaatatttt gtaattattt tctaatccct
1440
ttctgagtac tctggggccc tgcatttatg aggcacctac cttcattttg ctaacgctta
1500
ttctgaataa aagttttga ttccttaaaa aaaaaa
1536
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```
<210> 6178
<211> 310
<212> PRT
<213> Homo sapiens
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<400> 6178
Met Gly Thr Ser Val Glu Ser Leu Gly Glu Trp Ala Met Leu Phe Ala
1               5                   10                  15
Ser Gly Gly Phe Gln Val Lys Leu Tyr Asp Ile Glu Gln Gln Gln Ile
            20                  25                  30
Arg Asn Ala Leu Glu Asn Ile Arg Lys Glu Met Lys Leu Leu Glu Gln
        35                  40                  45
Ala Gly Ser Leu Lys Gly Ser Leu Ser Val Glu Glu Gln Leu Ser Leu
    50                  55                  60
Ile Ser Gly Cys Pro Asn Ile Gln Glu Ala Val Glu Gly Ala Met His
65                  70                  75                  80
Ile Gln Glu Cys Val Pro Glu Asp Leu Glu Leu Lys Lys Lys Ile Phe
                85                  90                  95
Ala Gln Leu Asp Ser Ile Ile Asp Asp Arg Val Ile Leu Ser Ser Ser
            100                 105                 110
Thr Ser Cys Leu Met Pro Ser Lys Leu Phe Ala Gly Leu Val His Val
```

```
                   115                      120                      125
        Lys Gln Cys Ile Val Ala His Pro Val Asn Pro Pro Tyr Tyr Ile Pro
           130                      135                      140
        Leu Val Glu Leu Val Pro His Pro Glu Thr Ala Pro Thr Thr Val Asp
        145                      150                      155                      160
        Arg Thr His Ala Leu Met Lys Lys Ile Gly Xaa Val Pro His Ala Ser
                        165                      170                      175
        Pro Glu Gly Gly Gly Arg Leu Arg Ser Glu Pro Pro Ala Ile Cys Asn
                        180                      185                      190
        His Gln Arg Gly Leu Ala Ala Ser Gly Gly Arg Asn Xaa Cys Leu Leu
                        195                      200                      205
        Val Thr Trp Xaa Leu Val Met Ser Glu Gly Leu Gly Met Arg Tyr Ala
                   210                      215                      220
        Phe Ile Gly Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu
        225                      230                      235                      240
        Ser Tyr Cys Asp Arg Tyr Ser Glu Gly Ile Lys His Val Leu Gln Thr
                        245                      250                      255
        Phe Gly Pro Ile Pro Glu Phe Ser Arg Ala Thr Ala Glu Lys Val Asn
                        260                      265                      270
        Gln Asp Met Cys Met Lys Val Pro Asp Asp Pro Glu His Leu Ala Ala
                   275                      280                      285
        Arg Arg Gln Trp Arg Asp Glu Cys Leu Met Arg Leu Ala Lys Leu Lys
                   290                      295                      300
        Ser Gln Val Gln Pro Gln
        305                      310


        <210> 6179
        <211> 2940
        <212> DNA
        <213> Homo sapiens

        <400> 6179
        nnctgcaggt ggcgcgggag gctacgcgcg gggcgggtgc tgcttgctgc aggctctggg
        60
        gagtcgccat gcctacaaca cagcagtccc ctcaggatga gcaggaaaag ctcttggatg
        120
        aagccataca ggctgtgaag gtccagtcat tccaaatgaa gagatgcctg gacaaaaaca
        180
        agcttatgga tgctctaaaa catgcttcta atatgcttgg tgaactccgg acttctatgt
        240
        tatcaccaaa gagttactat gaactttata tggccatttc tgatgaactg cactacttgg
        300
        aggntctacc tgacagatga gtttgctaaa ggaaggaaag tggcagatct ctacgaactt
        360
        gtacagtatg ctggaaacat tatcccaagg ctttaccttt tgatcacagt tggagttgta
        420
        tatgtcaagt catttcctca gtccaggaag gatattttga aagatttggt agaaatgtgc
        480
        cgtggtgtgc aacatccctt gaggggtctg tttcttcgaa attaccttct tcagtgtacc
        540
        agaaatatct tacctgatga aggagagcca acagatgaag aaacaactgg tgacatcagt
        600
        gattccatgg attttgtact gctcaacttt gcagaaatga acaagctctg ggtgcgaatg
        660
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cagcatcagg gacatagccg agatagagaa aaaagagaac gagaaagaca agaactgaga
720
attttagtgg gaacaaattt ggtgcgcctc agtnncagtt ggaggtgtaa atgtggaacg
780
ttacaacaga ttgttttgac tggcatattg gagcaagttg taaactgtag ggatgctttg
840
gctcaagaat atctcatgga gtgtattatt caggttttcc ctgatgaatt tcacctccag
900
actttgaatc cttttcttcg ggcctgtgct gagttacacc agaatgtaaa tgtgaagaac
960
ataatcattg ctttaattga tagattagct ttatttgctc accgtgaaga tggacctgga
1020
atcccagcgg atattaaact ttttgatata ttttcacagc aggtggctac agtgatacag
1080
tctagacaag acatgccttc agaggatgtt gtatctttac aagtctctct gattaatctt
1140
gccatgaaat gttaccctga tcgtgtggac tatgttgata aagttctaga acaacagtg
1200
gagatattca ataagctcaa ccttgaacat attgctacca gtagtgcagt ttcaaaggaa
1260
ctcaccagac ttttgaaaat accagttgac acttacaaca atattttaac agtcttgaaa
1320
ttaaaacatt ttcacccact ctttgagtac tttgactacg agtccagaaa gagcatgagt
1380
tgttatgtgc ttagtaatgt tctggattat aacacagaaa ttgtctctca agaccaggtg
1440
gattccataa tgaatttggt atccacgttg attcaagatc agccagatca acctgtagaa
1500
gaccctgatc cagaagattt tgctgatgag cagagccttg tgggccgctt cattcatctg
1560
ctgcgctctg aggaccctga ccagcagtac ttgattttga acacagcacg aaaacatttt
1620
ggagctggtg gaaatcagcg gattcgcttc acactgccac ctttggtatt tgcagcttac
1680
cagctggctt ttcgatataa agagaattct aagtggatga caaatgggaa aagaaatgcc
1740
agaagatttt ttcatttgcc cnaccagact atcagtgctt tgatcaaagc agagctggca
1800
gaattgccct taagactttt tcttcaagga gcactagctg ctggggaaat tggttttgaa
1860
aatcatgaga cagtcgcata tgaattcatg tcccaggcat tttctctgta tgaagatgaa
1920
atcagcgatt ccaaagcaca gctagctgcc atcaccttga tcattggcac ttttgaaagg
1980
atgaagtgct tcagtgaaga gaatcatgaa cctctgagga ctcagtgtgc ccttgctgca
2040
tccaaacttc taaagaaacc tgatcagggc cgagctgagc acctgtgcac atctctttgg
2100
tctggcagaa acacggacaa aaatggggag gagcttcacg gaggcaagag ggtaatggag
2160
tgcctaaaaa aagctctaaa aatagcaaat cagtgcatgg accctctct acaagtgcag
2220
cttttttatag aaattctgaa cagatatatc tattttttatg aaaaggaaaa tgatgcggta
2280
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acaattcagg ttttaaacca gcttatccaa aagattcgag aagacctccc gaatcttgaa
2340
tccagtgaag aaacagagca gattaacaaa cattttcata acacactgga gcatttgcgc
2400
ttgcggcggg aatcaccaga atccgagggg ccaatttatg aaggtctcat cctttaaaaa
2460
ggaaatagct caccatactc ctttccatgt acatccagtg agggttttat tacgctaggt
2520
ttcccttcca tagattgtgc ctttcagaaa tgctgaggta ggtttcccat ttcttacctg
2580
tgatgtgttt tacccagcac ctccggacac tcaccttcag gaccttaata aaattattca
2640
cttggtaagt gttcaagtct ttctgatcac cccaagtagc atgactgatc tgcaattttt
2700
agagcttttt ttaggcactc cattaccctc ttgcctccgt gaagctcctc cccatttttg
2760
tccgtgtttc tgccagacca gaagagatgt gcacaggtgc tcacagctcg gccctgatca
2820
ggtttcttta gaagtttgga tgcagcaagg gcacactgag tcctcagagg ttcatgattc
2880
tcttcactga agcacttcat cctttcaaaa gtgccaatga tcaaggtgat ggcagctagc
2940
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<210> 6180
<211> 751
<212> PRT
<213> Homo sapiens

<400> 6180
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Met Leu Leu Ile Cys Leu Val Asn Ser Gly Leu Leu Cys Tyr His Gln
 1               5                  10                  15
Arg Val Thr Met Asn Phe Ile Trp Pro Phe Leu Met Asn Cys Thr Thr
            20                  25                  30
Trp Arg Xaa Tyr Leu Thr Asp Glu Phe Ala Lys Gly Arg Lys Val Ala
            35                  40                  45
Asp Leu Tyr Glu Leu Val Gln Tyr Ala Gly Asn Ile Ile Pro Arg Leu
        50                  55                  60
Tyr Leu Leu Ile Thr Val Gly Val Val Tyr Val Lys Ser Phe Pro Gln
65                  70                  75                  80
Ser Arg Lys Asp Ile Leu Lys Asp Leu Val Glu Met Cys Arg Gly Val
                85                  90                  95
Gln His Pro Leu Arg Gly Leu Phe Leu Arg Asn Tyr Leu Leu Gln Cys
            100                 105                 110
Thr Arg Asn Ile Leu Pro Asp Glu Gly Glu Pro Thr Asp Glu Glu Thr
            115                 120                 125
Thr Gly Asp Ile Ser Asp Ser Met Asp Phe Val Leu Leu Asn Phe Ala
        130                 135                 140
Glu Met Asn Lys Leu Trp Val Arg Met Gln His Gln Gly His Ser Arg
145                 150                 155                 160
Asp Arg Glu Lys Arg Glu Arg Glu Arg Gln Glu Leu Arg Ile Leu Val
                165                 170                 175
Gly Thr Asn Leu Val Arg Leu Ser Xaa Ser Trp Arg Cys Lys Cys Gly
            180                 185                 190
Thr Leu Gln Gln Ile Val Leu Thr Gly Ile Leu Glu Gln Val Val Asn
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5360

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                  195               200                   205
Cys Arg Asp Ala Leu Ala Gln Glu Tyr Leu Met Glu Cys Ile Ile Gln
      210               215               220
Val Phe Pro Asp Glu Phe His Leu Gln Thr Leu Asn Pro Phe Leu Arg
225               230               235               240
Ala Cys Ala Glu Leu His Gln Asn Val Asn Val Lys Asn Ile Ile Ile
                  245               250               255
Ala Leu Ile Asp Arg Leu Ala Leu Phe Ala His Arg Glu Asp Gly Pro
            260               265               270
Gly Ile Pro Ala Asp Ile Lys Leu Phe Asp Ile Phe Ser Gln Gln Val
      275               280               285
Ala Thr Val Ile Gln Ser Arg Gln Asp Met Pro Ser Glu Asp Val Val
      290               295               300
Ser Leu Gln Val Ser Leu Ile Asn Leu Ala Met Lys Cys Tyr Pro Asp
305               310               315               320
Arg Val Asp Tyr Val Asp Lys Val Leu Glu Thr Thr Val Glu Ile Phe
            325               330               335
Asn Lys Leu Asn Leu Glu His Ile Ala Thr Ser Ser Ala Val Ser Lys
            340               345               350
Glu Leu Thr Arg Leu Leu Lys Ile Pro Val Asp Thr Tyr Asn Asn Ile
      355               360               365
Leu Thr Val Leu Lys Leu Lys His Phe His Pro Leu Phe Glu Tyr Phe
      370               375               380
Asp Tyr Glu Ser Arg Lys Ser Met Ser Cys Tyr Val Leu Ser Asn Val
385               390               395               400
Leu Asp Tyr Asn Thr Glu Ile Val Ser Gln Asp Gln Val Asp Ser Ile
            405               410               415
Met Asn Leu Val Ser Thr Leu Ile Gln Asp Gln Pro Asp Gln Pro Val
      420               425               430
Glu Asp Pro Asp Pro Glu Asp Phe Ala Asp Glu Gln Ser Leu Val Gly
      435               440               445
Arg Phe Ile His Leu Leu Arg Ser Glu Asp Pro Asp Gln Gln Tyr Leu
      450               455               460
Ile Leu Asn Thr Ala Arg Lys His Phe Gly Ala Gly Gly Asn Gln Arg
465               470               475               480
Ile Arg Phe Thr Leu Pro Pro Leu Val Phe Ala Ala Tyr Gln Leu Ala
                  485               490               495
Phe Arg Tyr Lys Glu Asn Ser Lys Trp Met Thr Asn Gly Lys Arg Asn
            500               505               510
Ala Arg Arg Phe Phe His Leu Pro Xaa Gln Thr Ile Ser Ala Leu Ile
      515               520               525
Lys Ala Glu Leu Ala Glu Leu Pro Leu Arg Leu Phe Leu Gln Gly Ala
      530               535               540
Leu Ala Ala Gly Glu Ile Gly Phe Glu Asn His Glu Thr Val Ala Tyr
545               550               555               560
Glu Phe Met Ser Gln Ala Phe Ser Leu Tyr Glu Asp Glu Ile Ser Asp
            565               570               575
Ser Lys Ala Gln Leu Ala Ala Ile Thr Leu Ile Ile Gly Thr Phe Glu
            580               585               590
Arg Met Lys Cys Phe Ser Glu Glu Asn His Glu Pro Leu Arg Thr Gln
      595               600               605
Cys Ala Leu Ala Ala Ser Lys Leu Leu Lys Lys Pro Asp Gln Gly Arg
      610               615               620
Ala Glu His Leu Cys Thr Ser Leu Trp Ser Gly Arg Asn Thr Asp Lys
```

```
625                      630                      635                      640
Asn Gly Glu Glu Leu His Gly Gly Lys Arg Val Met Glu Cys Leu Lys
                645                      650                      655
Lys Ala Leu Lys Ile Ala Asn Gln Cys Met Asp Pro Ser Leu Gln Val
                660                      665                      670
Gln Leu Phe Ile Glu Ile Leu Asn Arg Tyr Ile Tyr Phe Tyr Glu Lys
            675                      680                      685
Glu Asn Asp Ala Val Thr Ile Gln Val Leu Asn Gln Leu Ile Gln Lys
        690                      695                      700
Ile Arg Glu Asp Leu Pro Asn Leu Glu Ser Ser Glu Glu Thr Glu Gln
705                      710                      715                      720
Ile Asn Lys His Phe His Asn Thr Leu Glu His Leu Arg Leu Arg Arg
                725                      730                      735
Glu Ser Pro Glu Ser Glu Gly Pro Ile Tyr Glu Gly Leu Ile Leu
                740                      745                      750
```

<210> 6181
<211> 1135
<212> DNA
<213> Homo sapiens

<400> 6181
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gccaagcgct actcctggtc cggcatgggc cgcatccaca agggcatccg cgagcagggc
60
cggtacctca acagccggcc ctccatccag aagcccgagg tcttcttcct gcccgacctg
120
cccaccacgc cctatttctc ccgggacgca cagaaacatg atgtggaagt gctggaacgg
180
aacttccaga ccatcctgtg tgagtttgag accctctaca agctttctc aaactgcagc
240
ctcccgcaag gatggaaaat gaacagcacc cccagcgggg agtggttcac ctttttacttg
300
gtcaatcagg gggtttgtgt tcccaggaac tgtaggaagt gcccacggac gtaccgcttg
360
ctcggaagcc ttcggacctg tattgggaac aatgtttttg gaacgcgtg catctctgtg
420
ctgagccctg ggactgtgat aacggagcac tatggaccca ccaacatccg catccgatgc
480
catttaggtc tgaaaactcc aaatggctgt gagctggtgg tggggggaga gccccagtgc
540
tgggcagaag ggcgctgcct tctctttgat gactctttcc tgcatgctgc gttccatgaa
600
ggttcagcag aggatggccc acgggtggtt ttcatggtgg atttgtggca tccaaacgtc
660
gcagcggccg aacggcaggc tcttgatttc atctttgctc cgggacgatg agagtatttc
720
ccatgctgga gtcggcgaga agggccgagg cggggcctgg cagactgtg tccggtcca
780
gtccctaccg gtgttgtttc catgctcaga aacctgcctc agcggaaagc tcttatttgg
840
gatttatat catgtcgggt ccctctttcc cttggttatt gtaaatggaa acttttcggc
900
ttgtatttcc ttagattttt ttttttttcct tccaatcatt tgcttcagag actcctttct
960
```

ggcctaacag cgcattcctt tgattggtcc ttgagtgacc agagacttag tgcccttgta
1020

agtctgtctt ctgttgctac ttgtttttt cagtgctctg aaatagagta actaaatggt
1080

tatttgtctg aatataataa tgtaaaactt cttgtggtca tcttaaaaaa aaaaa
1135

<210> 6182
<211> 236
<212> PRT
<213> Homo sapiens

<400> 6182
Ala Lys Arg Tyr Ser Trp Ser Gly Met Gly Arg Ile His Lys Gly Ile
1   5   10   15
Arg Glu Gln Gly Arg Tyr Leu Asn Ser Arg Pro Ser Ile Gln Lys Pro
                20   25   30
Glu Val Phe Phe Leu Pro Asp Leu Pro Thr Thr Pro Tyr Phe Ser Arg
                35   40   45
Asp Ala Gln Lys His Asp Val Glu Val Leu Glu Arg Asn Phe Gln Thr
            50   55   60
Ile Leu Cys Glu Phe Glu Thr Leu Tyr Lys Ala Phe Ser Asn Cys Ser
65   70   75   80
Leu Pro Gln Gly Trp Lys Met Asn Ser Thr Pro Ser Gly Glu Trp Phe
                85   90   95
Thr Phe Tyr Leu Val Asn Gln Gly Val Cys Val Pro Arg Asn Cys Arg
                100   105   110
Lys Cys Pro Arg Thr Tyr Arg Leu Leu Gly Ser Leu Arg Thr Cys Ile
            115   120   125
Gly Asn Asn Val Phe Gly Asn Ala Cys Ile Ser Val Leu Ser Pro Gly
        130   135   140
Thr Val Ile Thr Glu His Tyr Gly Pro Thr Asn Ile Arg Ile Arg Cys
145   150   155   160
His Leu Gly Leu Lys Thr Pro Asn Gly Cys Glu Leu Val Val Gly Gly
                165   170   175
Glu Pro Gln Cys Trp Ala Glu Gly Arg Cys Leu Leu Phe Asp Asp Ser
                180   185   190
Phe Leu His Ala Ala Phe His Glu Gly Ser Ala Glu Asp Gly Pro Arg
            195   200   205
Val Val Phe Met Val Asp Leu Trp His Pro Asn Val Ala Ala Ala Glu
            210   215   220
Arg Gln Ala Leu Asp Phe Ile Phe Ala Pro Gly Arg
225   230   235

<210> 6183
<211> 2530
<212> DNA
<213> Homo sapiens

<400> 6183
acgcgtcggt cgttggggcg ttgagcaagt gcgaccccgg agtcatttgg gctggggttg
60

gaggattagc atctgccatt gactcgcatt aaagggccca gcgtctcgcg tgagaggttg
120

```
aggttgtgtt gcgggggtcg ggtagctgta ggtcttagaa atggcatcaa aggtggcctt
180
ggcgaagttg cccagggtgg cagtgcagcc ccgggctgag gtgtagcagt catcgatacc
240
agccatcatg agcagcttct taggcacagg tgcggagacg atgccagtgc ccctgggtgc
300
agggatgagg cgtaccagca cagagccgca gcggcctgtc acctggtgag ggaaggagtc
360
aggagacggg ggcccgaggg agcctgcccc acggcaggcc catcacctgc caccagccta
420
ccttgcaagg gacagtgtgg ggcttgccga tcttgttccc ccagtagcct ctgcgcacgg
480
ggacgatgga gagcttggcc aggatgatgg ccccacggat ggcggtggcc acctccttgg
540
agcacttaac acccagaccg acgtggccat tgtagtcccc gatagcaaca aatgccttga
600
acctggtgcg ctggccggca cgggtctgct tctgcactgg cataatcttc aaaacctcat
660
ccttgagaga ggccccccagg aaaaagtcaa tgatctctga ttccttaatg ggcagagaga
720
agagatagat ctcctccagg gacttgatct tcatgtcctt gaccaagcgg cccaacttgg
780
tgacgggcat ccactcctta tctccggcct tgcctccgcg agctccgcgg cctcggcccc
840
ggccccgtcc acggccgcga ccccggccct ggtggccctg ggatggggaa ccgcggtggc
900
ttccgcggag gtttcggcag tggcatccgg ggccggggtc gcggccgtgg acggggccgg
960
ggccgaggcc gcggagctcg cggaggcaag gccgaggata aggagtggat gcccgtcacc
1020
aagttgggcc gcttggtcaa ggacatgaag atcaagtccc tggaggagat ctatctcttc
1080
tccctgccca ttaaggaatc agagatcatt gatttcttcc tgggggcctc tctcaaggat
1140
gaggttttga agattatgcc agtgcagaag cagaccccgtg ccggccagcg caccaggttc
1200
aaggcatttg ttgctatcgg ggactacaat ggccacgtcg gtctgggtgt taagtgctcc
1260
aaggaggtgg ccaccgccat ccgtggggcc atcatcctgg ccaagctctc catcgtcccc
1320
gtgcgcagag gctactgggg gaacaagatc ggcaagcccc acactgtccc ttgcaaggtg
1380
acaggccgct gcggctctgt gctggtacgc ctcatccctg cacccagggg cactggcatc
1440
gtctccgcac ctgtgcctaa gaagctgctc atgatggctg gtatcgatga ctgctacacc
1500
tcagcccggg gctgcactgc caccctgggc aacttcgcca aggccacctt tgatgccatt
1560
tctaagacct acagctacct gacccccgac ctctggaagg agactgtatt caccaagtct
1620
ccctatcagg agttcactga ccacctcgtc aagacccaca ccagagtctc cgtgcagcgg
1680
actcaggctc cagctgtggc tacaacatag ggtttttata caagaaaaat aaagtgaatt
1740
```

5364

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aagctgtcac cccaccatgg agaaaagagt cttttggttc tttttaacat aagtgattag
1800
tttaagagta tgctgaggag ccactgggct taaagaagga tgtaaataag acccaaatac
1860
atagggacca ggcgctgctt tctcatgttc acaaaagcag tcctccacca ctgaactcca
1920
ttctctcagg gggctcaatg aaggctaacc aatccgatgc atgtgtaggt aacagtccca
1980
tggactggca cttgtaaaca gccaatgcca aacccatcag gttcccaatg agatagacca
2040
aaccctgaag aaacttctgg cttgaacttt ctaacatctt gaaagtggct gaaatggcca
2100
taagtgcctg aatgggtcgc caggccatca tacacaccat catagtaggg aagatggaga
2160
tagtattgcc tgccatgtac atgatgaaga gattcatggg aatctgtttg aggggaccca
2220
aggcgatgtc ccagcagcgc ttctccacca ggatccggtc tgtctcttgc acgctggtat
2280
caggcacttg cttgtccaag taaccgactg ggtagagcga gtctccctgg ccactgcccc
2340
ggtcacttcg acccctgctg cctcctccag gcccgcttag ctcaatggcc cacttgaagc
2400
gccggcctcg gttagccacc aggccccccт gggccgtcat ggcaacagct gcgtcctata
2460
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2520
tgtctcaccc
2530


<210> 6184
<211> 308
<212> PRT
<213> Homo sapiens


<400> 6184
Arg Ala Ser Thr Pro Tyr Leu Arg Pro Cys Leu Arg Glu Leu Arg Gly
1               5                   10                  15
Leu Gly Pro Gly Pro Val His Gly Arg Asp Pro Gly Pro Gly Gly Pro
            20                  25                  30
Gly Met Gly Asn Arg Gly Gly Phe Arg Gly Gly Phe Gly Ser Gly Ile
        35                  40                  45
Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly
    50                  55                  60
Ala Arg Gly Gly Lys Ala Glu Asp Lys Glu Trp Met Pro Val Thr Lys
65                  70                  75                  80
Leu Gly Arg Leu Val Lys Asp Met Lys Ile Lys Ser Leu Glu Glu Ile
                85                  90                  95
Tyr Leu Phe Ser Leu Pro Ile Lys Glu Ser Glu Ile Ile Asp Phe Phe
            100                 105                 110
Leu Gly Ala Ser Leu Lys Asp Glu Val Leu Lys Ile Met Pro Val Gln
        115                 120                 125
Lys Gln Thr Arg Ala Gly Gln Arg Thr Arg Phe Lys Ala Phe Val Ala
    130                 135                 140
Ile Gly Asp Tyr Asn Gly His Val Gly Leu Gly Val Lys Cys Ser Lys
```

```
145                     150                    155                        160
Glu Val Ala Thr Ala Ile Arg Gly Ala Ile Ile Leu Ala Lys Leu Ser
                165                    170                    175
Ile Val Pro Val Arg Arg Gly Tyr Trp Gly Asn Lys Ile Gly Lys Pro
                180                    185                    190
His Thr Val Pro Cys Lys Val Thr Gly Arg Cys Gly Ser Val Leu Val
                195                    200                    205
Arg Leu Ile Pro Ala Pro Arg Gly Thr Gly Ile Val Ser Ala Pro Val
        210                    215                    220
Pro Lys Lys Leu Leu Met Met Ala Gly Ile Asp Asp Cys Tyr Thr Ser
225                    230                    235                    240
Ala Arg Gly Cys Thr Ala Thr Leu Gly Asn Phe Ala Lys Ala Thr Phe
                245                    250                    255
Asp Ala Ile Ser Lys Thr Tyr Ser Tyr Leu Thr Pro Asp Leu Trp Lys
                260                    265                    270
Glu Thr Val Phe Thr Lys Ser Pro Tyr Gln Glu Phe Thr Asp His Leu
        275                    280                    285
Val Lys Thr His Thr Arg Val Ser Val Gln Arg Thr Gln Ala Pro Ala
        290                    295                    300
Val Ala Thr Thr
305


<210> 6185
<211> 1231
<212> DNA
<213> Homo sapiens

<400> 6185
cacagcttgt tcctaggaag ggcttagcaa acgggggtgg ttgtccttct tggaagccac
60
atttgtttgc ctggtgagtg gtggagggca ctgctaggcc tgctagggct gacacggcca
120
gagtcagatg acctcatctc acatccagca ggtgaaatgc agtctttgat cccttgaaac
180
ccaccctcta ggaccaaggt cactgcagta ttggatagga cctcagggag ttagcagggg
240
gctcatggtt aagagtgtga actacagctt agacctacag ggttccctgc ccagctcctc
300
cacaaaccag ctgtgcaacc ctagacaagt gagttaatgt ccctgggcct cagtttcttc
360
ttagtaaaat gtgtgtagcc atagagggct gttatgagga ttcagtcaaa tgacacatga
420
tgtcttgggc acacctggcg tggattatgg cgcctgtagg agcaggaggg cttcctggag
480
gaggggcta gttgaacaga gtctagaaag tatagattgg gaagagcact ctgggaggca
540
ggatcaccat gtgcaaaggc tcagagaatg ccacccacta cctcctggaa atcaagggga
600
ttctgtgtgt ccaagggcat ggtggtctc taggcccccg acctgtgtct gggaggtgtc
660
aaggggaagc agatccgag gcccacactt gcatgttttc aggtgaggtc cagagatata
720
tccagagagg agtggaaggg ctcggagacc tacagcccca atactgcata tggtgtggac
780
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ttcctggtgc ccgtgatggg ctatatctgc cgcatctgcc acaagttcta tcacagcaac
840
tcaggggcac agctctccca ctgcaagtcc ctgggccact ttgagaacct gcagaaatac
900
aaggcggcca agaaccccag ccccaccacc cgacctgtga gccgccggtg cgcaatcaac
960
gcccggaacg ctttgacagc cctgttcacc tccagcggcc gcccaccctc ccagcccaac
1020
acccaggaca aaacacccag caaggtgacg gctcgaccct cccagccccc actacctcgg
1080
cgctcaaccc gcctcaaaac ctgatagagg gacctccctg tccctggcct gcctgggtcc
1140
agatctgcta atgcttttta ggagtctgcc tggaaacttt gacatggttc atgtttttac
1200
tcaaaatcca ataaaacaag gtaagtttgg c
1231

<210> 6186
<211> 133
<212> PRT
<213> Homo sapiens

<400> 6186
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
 1   5   10   15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
            20   25   30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
        35   40   45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
    50   55   60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65   70   75   80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85   90   95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100   105   110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
        115   120   125
Thr Arg Leu Lys Thr
    130

<210> 6187
<211> 909
<212> DNA
<213> Homo sapiens

<400> 6187
nagtcctccc aaagtacttg tgtccgggtg gtggactgga ttcgctgcgg agccctggaa
60
gctgcctttc cttctccctg tgcttaacca gaggtgccca tgggttggac aatgaggctg
120
gtcacagcag cactgttact gggtctcatg atggtggtca ctggagacga ggatgagaac
180

5367

agcccgtgtg cccatgaggc cctcttggac gaggacaccc tcttttgcca gggccttgaa
240

gttttctacc cagagttggg gaacattggc tgcaaggttg ttcctgattg taacaactac
300

agacagaaga tcacctcctg gatggagccg atagtcaagt tcccgggggc cgtgtacggc
360

gcaacctata tcctggtgat ggtggatcca gatgccccta gcagagcaga acccagacag
420

agattctgga gacattggct ggtaacagat atcaagggcg ccgacctgaa gaaagggaag
480

attcagggcc aggagttatc agcctaccag gctccctccc caccggcaca cagtggcttc
540

catcgctacc agttctttgt ctatcttcag gaaggaaaag tcatctctct ccttcccaag
600

gaaaacaaaa ctcgaggctc ttggaaaatg gacagatttc tgaaccgttt ccacctgggc
660

gaacctgaag caagcaccca gttcatgacc cagaactacc aggactcacc aaccctccag
720

gctcccagag aaagggccag cgagcccaag cacaaaaacc aggcggagat agctgcctgc
780

tagatagccg gctttgccat ccgggcatgt ggccacactg cccaccaccg acgatgtggg
840

tatggaaccc cctctggata cagaacccct tcttttccaa attaaaaaaa aaaatcatcc
900

agggcaaaa
909

<210> 6188
<211> 227
<212> PRT
<213> Homo sapiens

<400> 6188
Met Gly Trp Thr Met Arg Leu Val Thr Ala Ala Leu Leu Leu Gly Leu
1   5   10   15
Met Met Val Val Thr Gly Asp Glu Asp Glu Asn Ser Pro Cys Ala His
            20   25   30
Glu Ala Leu Leu Asp Glu Asp Thr Leu Phe Cys Gln Gly Leu Glu Val
        35   40   45
Phe Tyr Pro Glu Leu Gly Asn Ile Gly Cys Lys Val Val Pro Asp Cys
    50   55   60
Asn Asn Tyr Arg Gln Lys Ile Thr Ser Trp Met Glu Pro Ile Val Lys
65   70   75   80
Phe Pro Gly Ala Val Tyr Gly Ala Thr Tyr Ile Leu Val Met Val Asp
                85   90   95
Pro Asp Ala Pro Ser Arg Ala Glu Pro Arg Gln Arg Phe Trp Arg His
            100   105   110
Trp Leu Val Thr Asp Ile Lys Gly Ala Asp Leu Lys Lys Gly Lys Ile
        115   120   125
Gln Gly Gln Glu Leu Ser Ala Tyr Gln Ala Pro Ser Pro Pro Ala His
    130   135   140
Ser Gly Phe His Arg Tyr Gln Phe Phe Val Tyr Leu Gln Glu Gly Lys
145   150   155   160
Val Ile Ser Leu Leu Pro Lys Glu Asn Lys Thr Arg Gly Ser Trp Lys

```
                    165                  170                  175
    Met Asp Arg Phe Leu Asn Arg Phe His Leu Gly Glu Pro Glu Ala Ser
                180                  185                  190
    Thr Gln Phe Met Thr Gln Asn Tyr Gln Asp Ser Pro Thr Leu Gln Ala
            195                  200                  205
    Pro Arg Glu Arg Ala Ser Glu Pro Lys His Lys Asn Gln Ala Glu Ile
        210                  215                  220
    Ala Ala Cys
    225


    <210> 6189
    <211> 2761
    <212> DNA
    <213> Homo sapiens


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<212> PRT
<213> Homo sapiens

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Asn Leu Glu Ser Arg Thr Ile Ile Arg Gly Lys Arg Thr Arg Lys Ile
        35   40   45
Asn Asn Leu Asn Val Glu Glu Asn Ser Ser Gly Asp Gln Arg Arg Ala
    50   55   60
Pro Leu Ala Ala Gly Thr Trp Arg Ser Ala Pro Val Pro Val Thr Thr
65   70   75   80
Gln Asn Pro Pro Gly Ala Pro Pro Asn Val Leu Trp Gln Thr Pro Leu
                85   90   95
Ala Trp Gln Asn Pro Ser Gly Trp Gln Asn Gln Thr Ala Arg Gln Thr
            100   105   110
Pro Pro Ala Arg Gln Ser Pro Pro Ala Arg Gln Thr Pro Pro Ala Trp
        115   120   125
Gln Thr Gln Asn Pro Val Ala Trp Gln Asn Pro Val Ile Trp Pro Asn
    130   135   140
Pro Val Ile Trp Gln Asn Pro Val Ile Trp Pro Asn Pro Ile Val Trp
145   150   155   160
Pro Gly Pro Val Val Trp Pro Asn Pro Leu Ala Trp Gln Asn Pro Pro
                165   170   175
Gly Trp Gln Thr Pro Pro Gly Trp Gln Thr Pro Pro Gly Trp Gln Gly
            180   185   190
Pro Pro Asp Trp Gln Gly Pro Pro Asp Trp Pro Leu Pro Pro Asp Trp
        195   200   205
Pro Leu Pro Pro Asp Trp Pro Leu Pro Thr Asp Trp Pro Leu Pro Pro
    210   215   220
Asp Trp Ile Pro Ala Asp Trp Pro Ile Pro Pro Asp Trp Gln Asn Leu
225   230   235   240
Arg Pro Ser Pro Asn Leu Arg Pro Ser Pro Asn Ser Arg Ala Ser Gln
                245   250   255
Asn Pro Gly Ala Ala Gln Pro Arg Asp Val Ala Leu Leu Gln Glu Arg
            260   265   270
Ala Asn Lys Leu Val Lys Tyr Leu Met Leu Lys Asp Tyr Thr Lys Val
        275   280   285
Pro Ile Lys Arg Ser Glu Met Leu Arg Asp Ile Ile Arg Glu Tyr Thr
    290   295   300
Asp Val Tyr Pro Glu Ile Ile Glu Arg Ala Cys Phe Val Leu Glu Lys
305   310   315   320
Lys Phe Gly Ile Gln Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
                325   330   335
Ile Leu Ile Ser Thr Pro Glu Ser Leu Ala Gly Ile Leu Gly Thr Thr
            340   345   350
Lys Asp Thr Pro Lys Leu Gly Leu Leu Leu Val Ile Leu Gly Val Ile

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  Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Leu Leu Gly Asp
  385                    390                    395                    400
  Leu Arg Lys Leu Leu Thr Tyr Glu Phe Val Lys Gln Lys Tyr Leu Asp
                      405                    410                    415
  Tyr Arg Arg Val Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
                      420                    425                    430
  Gly Leu Arg Ser Tyr His Glu Thr Ser Lys Met Lys Val Leu Arg Phe
                      435                    440                    445
  Ile Ala Glu Val Gln Lys Arg Asp Pro Arg Asp Trp Thr Ala Gln Phe
      450                    455                    460
  Met Glu Ala Ala Asp Glu Ala Leu Asp Ala Leu Asp Ala Ala Ala Ala
  465                    470                    475                    480
  Glu Ala Glu Ala Arg Ala Glu Ala Arg Thr Arg Met Gly Ile Gly Asp
                      485                    490                    495
  Glu Ala Val Ser Gly Pro Trp Ser Trp Asp Asp Ile Glu Phe Glu Leu
                      500                    505                    510
  Leu Thr Trp Asp Glu Glu Gly Asp Phe Gly Asp Pro Trp Ser Arg Ile
                      515                    520                    525
  Pro Phe Thr Phe Trp Ala Arg Tyr His Gln Asn Ala Arg Ser Arg Phe
      530                    535                    540
  Pro Gln Thr Phe Ala Gly Pro Ile Ile Gly Pro Gly Gly Thr Ala Ser
  545                    550                    555                    560
  Ala Asn Phe Ala Ala Asn Phe Gly Ala Ile Gly Phe Phe Trp Val Glu
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<210> 6191
<211> 3021
<212> DNA
<213> Homo sapiens

<400> 6191

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420
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480
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2220
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<210> 6192
<211> 815
<212> PRT
<213> Homo sapiens
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Asp Asp Thr His Tyr Phe Val Met Thr Ala Lys Lys Gln Cys Leu Leu
            35                  40                  45
Arg Leu Gly Val Leu Arg Gln Asp Trp Pro Asp Thr Asn Arg Leu Leu
        50                  55                  60
Gly Ser Ala Asn Val Val Thr Glu Ala Leu Gln Arg Phe Thr Arg Ala
65                  70                  75                  80
Ala Ala Asp Phe Ala Thr His Gly Lys Leu Gly Lys Leu Glu Phe Ala
                85                  90                  95
Gln Asp Ala His Gly Gln Pro Asp Val Ser Ala Phe Asp Phe Thr Ser
            100                 105                 110
Met Met Arg Ala Glu Ser Ser Ala Arg Val Gln Glu Lys His Gly Ala
        115                 120                 125
Arg Leu Leu Leu Gly Leu Val Gly Asp Cys Leu Val Glu Pro Phe Trp
    130                 135                 140
Pro Leu Gly Thr Gly Val Ala Arg Gly Phe Leu Ala Ala Phe Asp Ala
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5374

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Leu Ala Glu Arg Glu Ser Leu Tyr Gln Leu Leu Ser Gln Thr Ser Pro
                180                   185                   190
Glu Asn Met His Arg Asn Val Ala Gln Tyr Gly Leu Asp Pro Ala Thr
            195                   200                   205
Arg Tyr Pro Asn Leu Asn Leu Arg Ala Val Thr Pro Asn Gln Val Arg
        210                   215                   220
Asp Leu Tyr Asp Val Leu Ala Lys Glu Pro Val Gln Arg Asn Asn Asp
    225                   230                   235                   240
Lys Thr Asp Thr Gly Met Pro Ala Thr Gly Ser Ala Gly Thr Gln Glu
                    245                   250                   255
Glu Leu Leu Arg Trp Cys Gln Glu Gln Thr Ala Gly Tyr Pro Gly Val
                260                   265                   270
His Val Ser Asp Leu Ser Ser Ser Trp Ala Asp Gly Leu Ala Leu Cys
                275                   280                   285
Ala Leu Val Tyr Arg Leu Gln Pro Gly Leu Leu Glu Pro Ser Glu Leu
    290                   295                   300
Gln Gly Leu Gly Ala Leu Glu Ala Thr Ala Trp Ala Leu Lys Val Ala
305                   310                   315                   320
Glu Asn Glu Leu Gly Ile Thr Pro Val Val Ser Ala Gln Ala Val Val
                325                   330                   335
Ala Gly Ser Asp Pro Leu Gly Leu Ile Ala Tyr Leu Ser His Phe His
            340                   345                   350
Ser Ala Phe Lys Ser Met Ala His Ser Pro Gly Pro Val Ser Gln Ala
            355                   360                   365
Ser Pro Gly Thr Ser Ser Ala Val Leu Phe Leu Ser Lys Leu Gln Arg
    370                   375                   380
Thr Leu Gln Arg Ser Arg Ala Lys Asp Leu Leu Gln Glu Asn Ala Glu
385                   390                   395                   400
Asp Ala Gly Gly Lys Lys Leu Arg Leu Glu Met Glu Ala Glu Thr Pro
                405                   410                   415
Ser Thr Glu Val Pro Pro Asp Pro Glu Pro Gly Val Pro Leu Thr Pro
                420                   425                   430
Pro Ser Gln His Gln Glu Ala Gly Ala Gly Asp Leu Cys Ala Leu Cys
            435                   440                   445
Gly Glu His Leu Tyr Val Leu Glu Arg Leu Cys Val Asn Gly His Phe
        450                   455                   460
Phe His Arg Ser Cys Phe Arg Cys His Thr Cys Glu Ala Thr Leu Trp
465                   470                   475                   480
Pro Gly Gly Tyr Glu Gln His Pro Gly Asp Gly His Phe Tyr Cys Leu
                485                   490                   495
Gln His Leu Pro Gln Thr Asp His Lys Ala Glu Gly Ser Asp Arg Gly
            500                   505                   510
Pro Glu Ser Pro Glu Leu Pro Thr Pro Ser Glu Asn Ser Met Pro Pro
            515                   520                   525
Gly Leu Ser Thr Pro Thr Ala Ser Gln Glu Gly Ala Gly Pro Val Pro
        530                   535                   540
Asp Pro Ser Gln Pro Thr Arg Arg Gln Ile Arg Leu Ser Ser Pro Glu
    545                   550                   555                   560
Arg Gln Arg Leu Ser Ser Leu Asn Leu Thr Pro Asp Pro Glu Met Glu
                565                   570                   575
Pro Pro Pro Lys Pro Pro Arg Ser Cys Ser Ala Leu Ala Arg His Ala
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            580                  585                  590
Leu Glu Ser Ser Phe Val Gly Trp Gly Leu Pro Val Gln Ser Pro Gln
            595                  600                  605
Ala Leu Val Ala Met Glu Lys Glu Glu Lys Glu Ser Pro Phe Ser Ser
        610                  615                  620
Glu Glu Glu Glu Glu Asp Val Pro Leu Asp Ser Asp Val Glu Gln Ala
625                  630                  635                  640
Leu Gln Thr Phe Ala Lys Thr Ser Gly Thr Met Asn Asn Tyr Pro Thr
                645                  650                  655
Trp Arg Arg Thr Leu Leu Arg Arg Ala Lys Glu Glu Glu Met Lys Arg
            660                  665                  670
Phe Cys Lys Ala Gln Thr Ile Gln Arg Arg Leu Asn Glu Ile Glu Ala
        675                  680                  685
Ala Leu Arg Glu Leu Glu Ala Glu Gly Val Lys Leu Glu Leu Ala Leu
        690                  695                  700
Arg Arg Gln Ser Ser Ser Pro Glu Gln Gln Lys Lys Leu Trp Val Gly
705                  710                  715                  720
Gln Leu Leu Gln Leu Val Asp Lys Lys Asn Ser Leu Val Ala Glu Glu
                725                  730                  735
Ala Glu Leu Met Ile Thr Val Gln Glu Leu Asn Leu Glu Glu Lys Gln
            740                  745                  750
Trp Gln Leu Asp Gln Glu Leu Arg Gly Tyr Met Asn Arg Glu Glu Asn
            755                  760                  765
Leu Lys Thr Ala Ala Asp Arg Gln Ala Glu Asp Gln Val Leu Arg Lys
        770                  775                  780
Leu Val Asp Leu Val Asn Gln Arg Asp Ala Leu Ile Arg Phe Gln Glu
785                  790                  795                  800
Glu Arg Arg Leu Ser Glu Leu Ala Leu Gly Thr Gly Ala Gln Gly
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<211> 2893
<212> DNA
<213> Homo sapiens

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180
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240
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300
atgaacaccc atagagctat agaatcaaac agccagactt ccctctcaa tgcagaggta
360
gtccagtatg ccaaagaagt agtggatttc agttcccatt atggaagtga gaatagtatg
420
tcctatacta tgtggaattt ggctggtgta ccaaatgtat tcccagttc tggtgacttt
480
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540

5376

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720
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1980
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2040
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2100
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2160
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2280
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tggagaatga gacatgcttt tccagctgtt tggttatttc tctggattaa ctgttcaact
2580
ggaaaatttt tagttttct agccaggtgt ggtggcacac acttgtagtc ctagcgacac
2640
gggaggtgga ggcaggagga ttacttgaga tgggattttg agactctagt gtacttatga
2700
ttgcacctgt gagcagccac tgcactccaa cctgggcaat atagcgagtc cctttctctt
2760
aaaaaaaatt gtagtgtttc cacttttctt ctgatatttt tgtctatttc actactggat
2820
aatgccaata taaaaatttg ggtataatca agaataagag gtaaactact aaataaaaaa
2880
agctttccaa ctg
2893
```

```
<210> 6194
<211> 621
<212> PRT
<213> Homo sapiens
```

```
<400> 6194
Met Ser Pro Val Phe Pro Met Leu Thr Val Leu Thr Met Phe Tyr Tyr
1               5                   10                  15
Ile Cys Leu Arg Arg Arg Ala Arg Thr Ala Thr Arg Gly Glu Met Met
                20                  25                  30
Asn Thr His Arg Ala Ile Glu Ser Asn Ser Gln Thr Ser Pro Leu Asn
            35                  40                  45
Ala Glu Val Val Gln Tyr Ala Lys Glu Val Val Asp Phe Ser Ser His
        50                  55                  60
Tyr Gly Ser Glu Asn Ser Met Ser Tyr Thr Met Trp Asn Leu Ala Gly
65                  70                  75                  80
Val Pro Asn Val Phe Pro Ser Ser Gly Asp Phe Thr Gln Thr Ala Val
                85                  90                  95
Phe Arg Thr Tyr Gly Thr Trp Trp Asp Gln Cys Pro Ser Ala Ser Leu
                100                 105                 110
Pro Phe Lys Arg Thr Pro Pro Asn Phe Gln Ser Gln Asp Tyr Val Glu
            115                 120                 125
Leu Thr Phe Glu Gln Gln Val Tyr Pro Thr Ala Val His Val Leu Glu
        130                 135                 140
Thr Tyr His Pro Gly Ala Val Ile Arg Ile Leu Ala Cys Ser Ala Asn
145                 150                 155                 160
Pro Tyr Ser Pro Asn Pro Pro Ala Glu Val Arg Trp Glu Ile Leu Trp
```

5378

```
                       165                 170                 175
Ser Glu Arg Pro Thr Lys Val Asn Ala Ser Gln Ala Arg Gln Phe Lys
                   180                 185                 190
Pro Cys Ile Lys Gln Ile Asn Phe Pro Thr Asn Leu Ile Arg Leu Glu
               195                 200                 205
Val Asn Ser Ser Leu Leu Glu Tyr Tyr Thr Glu Leu Asp Ala Val Val
           210                 215                 220
Leu His Gly Val Lys Asp Lys Pro Val Leu Ser Leu Lys Thr Ser Leu
225                 230                 235                 240
Ile Asp Met Asn Asp Ile Glu Asp Asp Ala Tyr Ala Glu Lys Asp Gly
                   245                 250                 255
Cys Gly Met Asp Ser Leu Asn Lys Lys Phe Ser Ser Ala Val Leu Gly
               260                 265                 270
Glu Gly Pro Asn Asn Gly Tyr Phe Asp Lys Leu Pro Tyr Glu Leu Ile
           275                 280                 285
Gln Leu Ile Leu Asn His Leu Thr Leu Pro Asp Leu Cys Arg Leu Ala
       290                 295                 300
Gln Thr Cys Lys Leu Leu Ser Gln His Cys Cys Asp Pro Leu Gln Tyr
305                 310                 315                 320
Ile His Leu Asn Leu Gln Pro Tyr Trp Ala Lys Leu Asp Asp Thr Ser
               325                 330                 335
Leu Glu Phe Leu Gln Ser Arg Cys Thr Leu Val Gln Trp Leu Asn Leu
           340                 345                 350
Ser Trp Thr Gly Asn Arg Gly Phe Ile Ser Val Ala Gly Phe Ser Arg
       355                 360                 365
Phe Leu Lys Val Cys Gly Ser Glu Leu Val Arg Leu Glu Leu Ser Cys
       370                 375                 380
Ser His Phe Leu Asn Glu Thr Cys Leu Glu Val Ile Ser Glu Met Cys
385                 390                 395                 400
Pro Asn Leu Gln Ala Leu Asn Leu Ser Ser Cys Asp Lys Leu Pro Pro
               405                 410                 415
Gln Ala Phe Asn His Ile Ala Lys Leu Cys Ser Leu Lys Arg Leu Val
           420                 425                 430
Leu Tyr Arg Thr Lys Val Glu Gln Thr Ala Leu Leu Ser Ile Leu Asn
       435                 440                 445
Phe Cys Ser Glu Leu Gln His Leu Ser Leu Gly Ser Cys Val Met Ile
       450                 455                 460
Glu Asp Tyr Asp Val Ile Ala Ser Met Ile Gly Ala Lys Cys Lys Lys
465                 470                 475                 480
Leu Arg Thr Leu Asp Leu Trp Arg Cys Lys Asn Ile Thr Glu Asn Gly
               485                 490                 495
Ile Ala Glu Leu Ala Ser Gly Cys Pro Leu Leu Glu Glu Leu Asp Leu
           500                 505                 510
Gly Trp Cys Pro Thr Leu Gln Ser Ser Thr Gly Cys Phe Thr Arg Leu
       515                 520                 525
Ala His Gln Leu Pro Asn Leu ⌐ln Lys Leu Phe Leu Thr Ala Asn Arg
       530                 535                 540
Ser Val Cys Asp Thr Asp Ile Asp Glu Leu Ala Cys Asn Cys Thr Arg
545                 550                 555                 560
Leu Gln Gln Leu Asp Ile Leu Gly Thr Arg Met Val Ser Pro Ala Ser
               565                 570                 575
Leu Arg Lys Leu Leu Glu Ser Cys Lys Asp Leu Ser Leu Leu Asp Val
           580                 585                 590
Ser Phe Cys Ser Gln Ile Asp Asn Arg Ala Val Leu Glu Leu Asn Ala
```

```
          595                    600                    605
     Ser Phe Pro Lys Val Phe Ile Lys Lys Ser Phe Thr Gln
         610                    615                    620
```

<210> 6195
<211> 518
<212> DNA
<213> Homo sapiens

<400> 6195

```
ggatcccaag agatattttc tgagctgaac tatgtggtca cagaaggcca gctcccagca
60
gcacgggact atgagggttc gccctgttct gtgtagcccc agctggttcc ctggggaaaa
120
gtttccactt ctgctgtcaa gaaccacaag ggtcaagccc catccctaca ataccaagt
180
acatccaaat tcttcactgg cacagaaatg gtgttacatc cactgggaac aaacctgcat
240
ccccacccca aggcatgtga caacagggac tgctaatgag ctttgtccgg gtaactcatt
300
cacgccatca tcttgctctt tccatagtca cttattaagc acaaactatg ccaaaaacta
360
tgtccagcac cgcacaggat ggtaaaatgc cctgaggggc caccccatc tgactcccgt
420
tgagcggagt gggcagccct gcctgggagc tccagcctcc tgcacccacg tgccccttg
480
ttatctctgc ctggatgcct cacaggcatc tcacgcgt
518
```

<210> 6196
<211> 117
<212> PRT
<213> Homo sapiens

<400> 6196

```
Met Trp Ser Gln Lys Ala Ser Ser Gln Gln His Gly Thr Met Arg Val
1               5                   10                  15
Arg Pro Val Leu Cys Ser Pro Ser Trp Phe Pro Gly Glu Lys Phe Pro
            20                  25                  30
Leu Leu Leu Ser Arg Thr Thr Arg Val Lys Pro His Pro Tyr Lys Tyr
            35                  40                  45
Gln Val His Pro Asn Ser Ser Leu Ala Gln Lys Trp Cys Tyr Ile His
        50                  55                  60
Trp Glu Gln Thr Cys Ile Pro Thr Pro Arg His Val Thr Thr Gly Thr
65                  70                  75                  80
Ala Asn Glu Leu Cys Pro Gly Asn Ser Phe Thr Pro Ser Ser Cys Ser
                85                  90                  95
Phe His Ser His Leu Leu Ser Thr Asn Tyr Ala Lys Asn Tyr Val Gln
                100                 105                 110
His Arg Thr Gly Trp
            115
```

<210> 6197
<211> 2841

```
<212> DNA
<213> Homo sapiens

<400> 6197
nagcattctt ccatctgtag atgtttcagc tgctgtacaa gggagtccca tttcaggtgt
60
ggggctgggc atggtcactc ctgctggatg tctggaaggt gaaaaccaag gacctaggga
120
aataccaggt acagcctttc cccgctcatc cagagcagga caaacaggcc aggtggtatc
180
aggagcccag gtctccagct ggagggaatg tcaaccctgc agtgggagca ggggcccatc
240
acgcatccta ggcacagatg ctaatgcagg cactgcaggt aagctgggct tggtatcctt
300
ccctggcttc agaaagaagc caacaaggag cgttttgcag aatgaaacct ttgtttccag
360
aagcactgct gactgtaagt ggttgccgtt tgtggcagtg agcattttgt ccattctgag
420
gttggattgg tttctccttt tggccttgcc ctgccctaca gaccataaag gagaacagca
480
agaagccccc agcaaacatc cacagatggc cctggacatc agccacattc tgaggaacat
540
gtcatgttct gggagggcta aggcatcaag taaggcctgt ggggctggag gatcacaggg
600
caggtggggc aatccagagc catggggggct tcccatggga attgggaggt cccaaggcag
660
agtcagaggt tccacaggag gagtcagaga gtcaccaagg gctctcctgg cccagggagc
720
agtcaacacc atggactgaa cacccactgg gctccaaccc ttgggccagg ctggggcatg
780
tggggccagg aggcagctca gagtgggagg cagagagaga agtgtgttca gagggcaccc
840
atatctggat gtaatgtggt cctgagactc tggctgggaa gtgcttccag ggtttcatat
900
gtgttatgca gctacttcct ctccccaacc ttaccgtgca ggaatcccag tgaatatgtt
960
gccaccatct tggagctcag tgccctcata gtgtaacagc accagcagat ctgcctgtgc
1020
acagacttcc tgtactacct cactcctgag gggagatgct tctgcagggc ctgcgacctg
1080
gtgcacaact ttnnagacac catcatcctg gagcggcact gcaccctcac tagccagggt
1140
gttgatgact tcctcaatgc caaggccacg ttcaagattt tcgacttcag tgatgcgttt
1200
gtgctgagca aggtgggctt ctccgggatt ttagttcagg aggtagaatg cagcttgaga
1260
tcaagtgtct gatcaaataa cttgaacttg atctggagag ctctggggag ccatagaagt
1320
tgttggataa aggagggaca gtcgtatatg ttttagagat gactgtggaa ggctgcctgg
1380
aaggagtgaa caagagccag gagaccaggg agggagcttg tggggcaggt ctggagatga
1440
caagggaggg atcctgcttt gatgaaaggt cttcagggaa tgtctcaggt tacactcagg
1500
```

```
tgtcctcaga gctagtgtgt tcaggggtct tgcctccagg atgaaaatga gaaggagttg
1560
tcagacaaga acatataaat gaaggctggc atcttcgtga gtgccaatcg ttgtcctggt
1620
gtggactact gtgggaatag gggtctctcc atccagggac atggtggatg gaccctacat
1680
cactccattc tgcccttcct ttccctccca ttctgagggc ctcagtgcaa gggcgctgtc
1740
caacctctgg tgctgaagca gccgagagac ccaagcctgc cactcaggat atgacagcac
1800
agccagtggc ctctactgga tcctgtacaa cctcagaaga cacctagaca ctgggagtgc
1860
tgccaccacg tggtgcaaga gttctgaggg accgcaattc tgaagacatt gaatgctgct
1920
tcctgctccc tccatggacc tgcacagaat tgtcccatgt ttctgtttgt ttgggcacca
1980
ctgaggaagg aagcatgaag gacgcagagg tcaggccatt ctattgccct cctgctgctg
2040
ggtctttaat cctgagatgg cttcaggggc tggtccttct ccatggcccc ctccacatat
2100
ctcagccatt ttgcaaaccc tggtcagaat gaaacattcc ttgggaactc gggccatgag
2160
aagcatcctt cctgaccacc tgactgcgga aacatcctta tcgcatcctc ccgggcgaag
2220
gcccaacagc ctgactgcag gaacatcctt gccatatcct gccgggcagc aagctctacc
2280
gcccagaccc ctccttccca gtcccatgat cgccccagcc tgtgagcggc agttggtgat
2340
ggcactaagc tgatttcctc ctctgcaggg ttttgctagt aataaaggtg ttgctgttga
2400
agccgtcaac tgtctttcta tgtctttctt taaccttgc cttgccttca aaatctaaca
2460
atagctctac ctctccattt taccaaggag gatatgagac tcaaggagag caagagactt
2520
acccagaatt acacagccag tgagtcacag aacttgaact tgagctcagt tcagctgaat
2580
ccagaactca tgtcttcctg agagtccagg gaaggaaagg tggaactgca gccagtgggt
2640
cccacaggct tgtcctagga gaccacatgc agactcctgg gaattgtgtc ctcttgggca
2700
caaaagaaga actgttcacc tgtgctgcat cagctaagtg tccccattgt cccaaattgt
2760
tatatttttt caaagtttca ttttagtaac tagatttctc acagctcagt gttgaaaaca
2820
aagcacagag gcatatagaa a
2841

<210> 6198
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6198
Met Gly Ala Ser His Gly Asn Trp Glu Val Pro Arg Gln Ser Gln Arg
```

5382

```
1                 5                      10                     15
Phe His Arg Arg Ser Gln Arg Val Thr Lys Gly Ser Pro Gly Pro Gly
             20                      25                     30
Ser Ser Gln His His Gly Leu Asn Thr His Trp Ala Pro Thr Leu Gly
             35                      40                     45
Pro Gly Trp Gly Met Trp Gly Gln Glu Ala Ala Gln Ser Gly Arg Gln
             50                      55                     60
Arg Glu Lys Cys Val Gln Arg Ala Pro Ile Ser Gly Cys Asn Val Val
65                      70                     75                     80
Leu Arg Leu Trp Leu Gly Ser Ala Ser Arg Val Ser Tyr Val Leu Cys
                 85                      90                     95
Ser Tyr Phe Leu Ser Pro Thr Leu Pro Cys Arg Asn Pro Ser Glu Tyr
             100                     105                    110
Val Ala Thr Ile Leu Glu Leu Ser Ala Leu Ile Val
             115                     120
```

<210> 6199
<211> 1777
<212> DNA
<213> Homo sapiens

<400> 6199
ctgctttttcc cagcagtatt agtgtccccc aggcagggga ccttttccac attacatcac
60
tgccccatcc caccttacaa cactctggcc cctctgcttg gtccccttttt tccccaggca
120
ggaggcaatc ccaggggcct gcctgataga ggcatttcct gtccctgtct cctcctgcat
180
ctcctttatc ctgcactgcc accctctatt ccccattctg tgttggactt tgaaggcccc
240
aagcccagcc aaagcactga gttcccccctt aagacacctc cacaccctcc ccacaagcaa
300
agcacaaatt ttggggtcca tgtagcatgg gccacgtagg aggctcctga cttgccaggg
360
gcccagcctc agcatacccca ccgaggcagc tgccagcctg ggctgagggt gggcatgagg
420
caggagtcag cacttggacc tagggatgtg aggttttctg tgccccaagt ttgtgggaag
480
gtgggcacta ctgctgggcc cacagacaca gccagctggc aaaagggagg tctagcccag
540
cagagagatg aggacatttt gcttctcctt catgcccaca gcatgagctg agcttctgct
600
ttgctggaaa tgaaataaac ttggtatgaa ttgtgccaag gcctccccag ttgtcatcct
660
gcctcttgtt gccctccctg tccttgcccc ccaccccaca cccatgcccc tgtttccctta
720
cagattttga tattgttcta atgtgtaata gaaccagccg agtccccttt tatcagaagg
780
gtctgaaaag cagcagcaca gagtaggtga acacaggcct gcaagtgcga ccacctcaga
840
cccagtacgt gtgcccacag tggacacact cacacctcca acacacccac gcgcaggcat
900
gtgtacacgc atgtacacac gcatgcatgc acagccagat ggccactcag cacagatgtg
960
```

```
gcagagggaa tggtctgatc ctgctgaaag ccattaagga gaaacgaatt tcccagtgcc
1020
cgggctgcaa gagagcctta taggggccct gtttcctggg catgcgcttc ctctgccagc
1080
caaccccccac ttgcccaagt cactggtgca ataacttttc tgccttcctc agagcagaga
1140
aattgggaat tgtgttaggt gggtgtgggc agctctgctg agccaagcag acacggatgt
1200
cccctcttct gggaggaggg tagtgctccc aggcctcagg agtccagaca gagaccccca
1260
aagcctgact gccaacagaa accctctcct agtgaggggc aggtgggtgt gcccnncagg
1320
tccccacacc cacagggagg cttcacacac tgcccagtac cggggatgcc aggaggcagg
1380
cccctctgct gctgccactg ctgccaacac tgcccagctt gtgaggccag gaggagcccc
1440
tgtcccactc ggtgctgctg ctcttctgac ccctgctgtg aggaatggga ttcttggtcg
1500
aaaaaattgg ttttcctttt ttgtataaat gaaaagaatc caggagaagc tgccaccctc
1560
ccctcccagc gtgatgcgct accttgcttc ggcgtcttgt cgccctttcc gcctttggtc
1620
cagggacagc ccagcagatc ctcctggttc tgacctgggg ggtgtttgca tcacccccctt
1680
ttacttgtat taaaaaaaaa tgatgggttg aaaatgtact gaggattaaa aatgtacttt
1740
tttataaata aagtgtttaa aacaaaaaaa aaaaaaa
1777
```

```
<210> 6200
<211> 164
<212> PRT
<213> Homo sapiens
```

```
<400> 6200
Val Gly Val Gly Ser Ser Ala Glu Pro Ser Arg His Gly Cys Pro Leu
1               5                   10                  15
Phe Trp Glu Glu Gly Ser Ala Pro Arg Pro Gln Glu Ser Arg Gln Arg
            20                  25                  30
Pro Pro Lys Pro Asp Cys Gln Gln Lys Pro Ser Pro Ser Glu Gly Gln
            35                  40                  45
Val Gly Val Pro Xaa Arg Ser Pro His Pro Gln Gly Gly Phe Thr His
    50                  55                  60
Cys Pro Val Pro Gly Met Pro Gly Gly Arg Pro Leu Cys Cys Cys His
65                  70                  75                  80
Cys Cys Gln His Cys Pro Ala Cys Glu Ala Arg Arg Ser Pro Cys Pro
                85                  90                  95
Thr Arg Cys Cys Cys Ser Ser Asp Pro Cys Cys Glu Glu Trp Asp Ser
            100                 105                 110
Trp Ser Lys Lys Leu Val Phe Leu Phe Cys Ile Asn Glu Lys Asn Pro
            115                 120                 125
Gly Glu Ala Ala Thr Leu Pro Ser Gln Arg Asp Ala Leu Pro Cys Phe
            130                 135                 140
Gly Val Leu Ser Pro Phe Pro Pro Leu Val Gln Gly Gln Pro Ser Arg
```

```
145                  150                  155                  160
Ser Ser Trp Phe


<210> 6201
<211> 604
<212> DNA
<213> Homo sapiens

<400> 6201
acgcgtgggc atgtgcacgt gtgtgcctgt gcatgcgtga atatgcgtgt gtgtgcgtgc
60
tgtgctgagg acagcgtgag ttttcacaga agcaggtaaa aagttccaca ggaacagaga
120
ccaggacaag accagccctg atgggagaag ccagaggacc cagaggaact tccaggaggc
180
ccttagctcc ctcagacaga atgcgggatc gcaatgccca gcaaagggca attcaaggac
240
agtggacgct ggggagagga gcagagtggg cagctctcag gagggcagga ctgcgaggct
300
gcaggagga gttcggtggg aagggacagc ctcagagcct aagctgcgcc tcctgggaaa
360
ggggtatgac tggcaggcac acaaatgtct ctcaaggaag gtgggcctgg ggccacagag
420
ctcccagagg agggagtgga gagggagagc ccgcagagga gagaccaggc agggctggcg
480
atcacgcagg tgcacagggt gaacgtcagg actgaaacgg aagacaatgt ccccatgcaa
540
gactggctga aacgaactca cacagaattt ttaagaggct cctgtgttgg gtgaaaaccg
600
gccg
604


<210> 6202
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6202
Met Gly Glu Ala Arg Gly Pro Arg Gly Thr Ser Arg Arg Pro Leu Ala
1               5                   10                  15
Pro Ser Asp Arg Met Arg Asp Arg Asn Ala Gln Gln Arg Ala Ile Gln
            20                  25                  30
Gly Gln Trp Thr Leu Gly Arg Gly Ala Glu Trp Ala Ala Leu Arg Arg
        35                  40                  45
Ala Gly Leu Arg Gly Cys Arg Glu Glu Phe Gly Gly Lys Gly Gln Pro
    50                  ·55                 60
Gln Ser Leu Ser Cys Ala Ser Trp Glu Arg Gly Met Thr Gly Arg His
65                  70                  75                  80
Thr Asn Val Ser Gln Gly Arg Trp Ala Trp Gly His Arg Ala Pro Arg
                85                  90                  95
Gly Gly Ser Gly Glu Gly Glu Pro Ala Glu Glu Arg Pro Gly Arg Ala
            100                 105                 110
Gly Asp His Ala Gly Ala Gln Gly Glu Arg Gln Asp
```

                    115   120

<210> 6203
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 6203
nnaccgttgc ggccgcaggg gtctgggcag ggctgggcag tgctgccgga gcaaaagcgg
60
tagcgggagc ccggccggag ctgggtctgg agacgccgtg gcagcctgaa cggagtgtgc
120
gacggattgg gaggtttgtc tacagatttt gagcgttcga agttgacccc tgactaagta
180
tactttgctg ctccctcagc ctttgaaaaa atgtctgtca catatgatga ttccgttgga
240
gtagaagtgt ccagcgacag cttctgggag gtcgggaact acaagcggac tgtgaagcgg
300
atcgacgatg gccaccgcct gtgcagcgac ctcatgaact gcctgcatga gcgggcgcgc
360
atcgagaagg cgtatgcgca gcagctcact gagtgggccc ggcgctggag gcagctcgtg
420
gagaaagggc cccagtacgg gaccgtggag aaggcctgga tggccttcat gtccgaggca
480
gagagggtga gcgagctgca cctcgaggtg aaggcctcac tgatgaacga tgacttcgag
540
aagatcaaga actggcagaa ggaagccttt cacaagcaga tgatgggcgg cttcaaggag
600
accaaggaag ctgaggacgg ctttcggaag gcacagaagc cctgggccaa gaagctgaaa
660
gaggtagaag cagcaaagaa agcccaccat gcagcgtgca agaggagaa gctggctatc
720
tcacgagaag ccaacagcaa ggcagaccca tccctcaacc ctgaacagct caagaaattg
780
caagacaaaa tagaaaagtg caagcaagat gttcttaaga ccaaagagaa gtatgagaag
840
tccctgaagg aactcgacca gggcacaccc cagtacatgg agaacatgga gcaggtgttt
900
gagcagtgcc agcagttcga ggagaaacgc cttcgcttct ccgggaggt tctgctggag
960
gttcagaagc acctagacct gtccaatgtg ctggctaca aagccattta ccatgacctg
1020
gagcagagca tcagagcagc tgatgcagtg gaggacctga ggtggttccg agccaatcac
1080
gggccgggca tggccatgaa ctggccgcag tttgaggagt ggtccgcaga cctgaatcga
1140
accctcagcc ggagagagaa gaagaaggcc actgacggcg tcaccctgac gggcatcaac
1200
cagacaggcg accagtctct gccgagtaag cccagcagca cccttaatgt cccgagcaac
1260
cccgcccagt ctgcgcagtc acagtccagc tacaacccct tcgaggatga ggacgacacg
1320
ggcagcaccg tcagtgagaa ggacgacact aaggccaaaa atgtgagcag ctacgagaag
1380

```
acccagagct atcccaccga ctggtcagac gatgagtcta acaacccctt ctcctccacg
1440
gatgccaatg gggactcgaa tccattcgac gacgacgcca cctcggggac ggaagtgcga
1500
gtccgggccc tgtatgacta tgaggggcag gagcatgatg agctgagctt caaggctggg
1560
gatgagctga ccaagatgga ggacgaggat gagcagggct ggtgcaaggg acgcttggac
1620
aacgggcaag ttggcctata cccggcaaat tatgtggagg cgatccagtg atgagtcggg
1680
gacaggccag cggggggacg gaggcggcgg gcccaggagc ctcagccagc cacgtgggca
1740
tccactcctt ttcctgcaag agatgatggt tccattgctc ttggcttcat ggtgttcctg
1800
gaaggcagat gagctggtca tttcgcctgg gactcggcac ctttccgagt gcagctggag
1860
ggatctgagc gcaggaagac gcagaacaac agaaatagcc gcccctcccc gcccactgtg
1920
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1980
gtgggttaca ctgatcttgt tccactgatt actctctctg acgagtccat cacctgcaac
2040
ttaaatgaac aagcttacat cccattttga gtgaagattt tgaggttttt aatttaaagg
2100
ctgtgtacag ttatactttt ttatacacct gttcatttct acttaaatta tggcacagat
2160
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2220
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gtgggaccgg gttatggtcg ggtttctatt gggaatgctc tttgtgcttt tgggcatctg
2340
aatggaagct ttacatagaa ccttaggtag aactccccca aatcgccata tttaaaaatt
2400
attttcactc tattcttgct taaaactgta ctcttttgca aattaacaat tttatcactg
2460
attcagagtt aaaaagaaga ctaacttttc aagcaaatgc atctgtaaag atgctttaga
2520
ttagactgtc atgtctcagt gtctatctgt atatattatt tgatattcag agaatctaaa
2580
gcactcgtct actgttttaa tgagatttaa cagcttttaa cagtgagttt cgtttgtaaa
2640
ctgcttgaag tctgtggcat tcaggcacac atctggctgg ccggctgggt ctcctcccgg
2700
gctcagtggg cctggggcct ctctgacgtg gtgcctgctg gagggaggct cgtcgtcacc
2760
agctgactgc tggtccggct tctgaccggc ctttgtcctg gctccgtagc agaacactgt
2820
aaaagtgccc gcgtctttgc agtagttgca gatttcagtc gtcgtgttac ttgtgcacaa
2880
acagaagctg ggtcttaccc gcagcacgag tgtctcgggc tgcccggagt cgcccgggag
2940
caggtgctgc agccagagtt acgcggggggc cacgcgggcc ggcggggggtg gggggaacgt
3000
```

```
ggggggaacct gtgtttcacg tgactcagca gtgcccgccg ccgtcaccag ctatgcattc
3060
actccgtttc cagtgagcag atgtcttgct tggaaagtgg acctgtgtct gtgtctgtcc
3120
tgagaactta ccagcagaaa tcctcatttc tgtgctacgg atttaccaaa aattgtcaag
3180
tctttttcag tttaacagtt cctttacatg tgtagtattt gaggaaaaaa atcaataaac
3240
agttgatctc gtgcatatgg aagtcccttc gccatcatct gtcttcatgc ccacttcact
3300
tggcgggggt ggcctccctg gggcttacta gctttggagc tgggcaagat ccagggcaca
3360
ggaccccctgc ccaaaaggcc acggcccact gcccctgcca aactggaggt tggggatttg
3420
aggcacctga gccccttggg gttcccttct ccccgagacc tg
3462
```

```
<210> 6204
<211> 486
<212> PRT
<213> Homo sapiens
```

```
<400> 6204
Met Ser Val Thr Tyr Asp Asp Ser Val Gly Val Glu Val Ser Ser Asp
1               5                   10                  15
Ser Phe Trp Glu Val Gly Asn Tyr Lys Arg Thr Val Lys Arg Ile Asp
            20                  25                  30
Asp Gly His Arg Leu Cys Ser Asp Leu Met Asn Cys Leu His Glu Arg
            35                  40                  45
Ala Arg Ile Glu Lys Ala Tyr Ala Gln Gln Leu Thr Glu Trp Ala Arg
        50                  55                  60
Arg Trp Arg Gln Leu Val Glu Lys Gly Pro Gln Tyr Gly Thr Val Glu
65                  70                  75                  80
Lys Ala Trp Met Ala Phe Met Ser Glu Ala Glu Arg Val Ser Glu Leu
                85                  90                  95
His Leu Glu Val Lys Ala Ser Leu Met Asn Asp Asp Phe Glu Lys Ile
            100                 105                 110
Lys Asn Trp Gln Lys Glu Ala Phe His Lys Gln Met Met Gly Gly Phe
        115                 120                 125
Lys Glu Thr Lys Glu Ala Glu Asp Gly Phe Arg Lys Ala Gln Lys Pro
    130                 135                 140
Trp Ala Lys Lys Leu Lys Glu Val Glu Ala Ala Lys Lys Ala His His
145                 150                 155                 160
Ala Ala Cys Lys Glu Glu Lys Leu Ala Ile Ser Arg Glu Ala Asn Ser
                165                 170                 175
Lys Ala Asp Pro Ser Leu Asn Pro Glu Gln Leu Lys Lys Leu Gln Asp
            180                 185                 190
Lys Ile Glu Lys Cys Lys Gln Asp Val Leu Lys Thr Lys Glu Lys Tyr
        195                 200                 205
Glu Lys Ser Leu Lys Glu Leu Asp Gln Gly Thr Pro Gln Tyr Met Glu
    210                 215                 220
Asn Met Glu Gln Val Phe Glu Gln Cys Gln Gln Phe Glu Glu Lys Arg
225                 230                 235                 240
Leu Arg Phe Phe Arg Glu Val Leu Leu Glu Val Gln Lys His Leu Asp
```

5388

```
                     245                    250                    255
Leu Ser Asn Val Ala Gly Tyr Lys Ala Ile Tyr His Asp Leu Glu Gln
              260                    265                    270
Ser Ile Arg Ala Ala Asp Ala Val Glu Asp Leu Arg Trp Phe Arg Ala
              275                .   280                    285
Asn His Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp
          290                    295                    300
Ser Ala Asp Leu Asn Arg Thr Leu Ser Arg Arg Glu Lys Lys Lys Ala
305                    310                    315                    320
Thr Asp Gly Val Thr Leu Thr Gly Ile Asn Gln Thr Gly Asp Gln Ser
                  325                    330                    335
Leu Pro Ser Lys Pro Ser Ser Thr Leu Asn Val Pro Ser Asn Pro Ala
              340                    345                    350
Gln Ser Ala Gln Ser Gln Ser Ser Tyr Asn Pro Phe Glu Asp Glu Asp
          355                    360                    365
Asp Thr Gly Ser Thr Val Ser Glu Lys Asp Asp Thr Lys Ala Lys Asn
      370                    375                    380
Val Ser Ser Tyr Glu Lys Thr Gln Ser Tyr Pro Thr Asp Trp Ser Asp
385                    390                    395                    400
Asp Glu Ser Asn Asn Pro Phe Ser Ser Thr Asp Ala Asn Gly Asp Ser
                  405                    410                    415
Asn Pro Phe Asp Asp Asp Ala Thr Ser Gly Thr Glu Val Arg Val Arg
              420                    425                    430
Ala Leu Tyr Asp Tyr Glu Gly Gln Glu His Asp Glu Leu Ser Phe Lys
              435                    440                    445
Ala Gly Asp Glu Leu Thr Lys Met Glu Asp Glu Asp Glu Gln Gly Trp
          450                    455                    460
Cys Lys Gly Arg Leu Asp Asn Gly Gln Val Gly Leu Tyr Pro Ala Asn
465                    470                    475                    480
Tyr Val Glu Ala Ile Gln
                  485
```

```
<210> 6205
<211> 926
<212> DNA
<213> Homo sapiens

<400> 6205
nngcgcctcc canagagaat aggccccagc ttcaatggag gctgtggaga gatggagaag
60
tggggtgaag attttggaga atctcggggg agagcaaggg aagggaagga gtttgccgac
120
agccagaagt tgctgttcat ggaaacttcg gccaaactga accaccaggt gtcggaggtg
180
ttcaatacag tggcccaaga gctactgcag agaagcgacg aggagggcca ggctctacng
240
ggggaagaca ccccctgcct gggccatggc cagctctagg tggattctga ttcactgtca
300
atgctgggtt gctcccgagc cctagatgtt cctggaagtt ggcccccttt atgaaaacca
360
cttcccacag ccagtgggaa ctgccagagg aagatctggc gtcacatggc tcccaggaaa
420
gtgctgtgcc ctatccccac tgataccatc tgattccccg atgcctgtgc ctgttccacc
480
```

```
tggacggtgg ccccctcagc ctggcagcct ctggacagag aggaaggaag gattggaaaa
540
gtccccgcag cacagcgacg gtgggaagat gccttacgtc tgatcttgat gggggcactg
600
gcctggagcc tgggcccacc tgcttctggg gggttgggga gcaggccaga tggaggtggt
660
ggtgccagga agaaatggag cgatgactga ctgtggggtg ggcccaggat ttccgcatct
720
tggtgaagtt gcccctggga agggcagctg ggggcagtgg cgccagttcc cttccatggt
780
ctcccggctg gcaatgtggt gaagctgagt ttctgtccaa tgagcaggaa gattctgaga
840
catttcgcct gagatataag ttgtactgcg tatgcagttt ttcctccaaa aattaaattg
900
cttttgacaa tctgaaaaaa aaaaaa
926
```

```
<210> 6206
<211> 92
<212> PRT
<213> Homo sapiens
```

```
<400> 6206
Xaa Arg Leu Pro Xaa Arg Ile Gly Pro Ser Phe Asn Gly Gly Cys Gly
1               5                   10                  15
Glu Met Glu Lys Trp Gly Glu Asp Phe Gly Glu Ser Arg Gly Arg Ala
            20                  25                  30
Arg Glu Gly Lys Glu Phe Ala Asp Ser Gln Lys Leu Leu Phe Met Glu
        35                  40                  45
Thr Ser Ala Lys Leu Asn His Gln Val Ser Glu Val Phe Asn Thr Val
    50                  55                  60
Ala Gln Glu Leu Leu Gln Arg Ser Asp Glu Glu Gly Gln Ala Leu Xaa
65                  70                  75                  80
Gly Glu Asp Thr Pro Cys Leu Gly His Gly Gln Leu
                85                  90
```

```
<210> 6207
<211> 1384
<212> DNA
<213> Homo sapiens
```

```
<400> 6207
nntgatcaga ggtcctgggt gtctggggaa gctgggctgt gcgtgtatgc gtctaccatg
60
tgggggtgcc tgtgagtgtg ctggggcgtc tgcagtgaag gcctcctgag accactccac
120
ggaaacaccg ggaatccctg cagctgagcc tgtctctcac gggaccggga agctggagag
180
agccccaacc ctgcccgctg gggccgagct ccctgctcct gcagcagtcc cgtgccccac
240
actctgagtc tgccctatcc acagctgctg ggcctctctg tggccaccat ggtgactctt
300
acctacttcg gggcccactt tgctgtcatc cgccgagcgt ccctggagaa gaacccgtac
360
```

```
caggctgtgc accaatgggc cttctctgcg gggttgagcc tggtgggcct cctgactctg
420
ggagccgtgc tgagcgctgc agccaccgtg agggaggccc agggcctcat ggcaggggc
480
ttcctgtgct tctccctggc gttctgygca caggtgcagg tggtgttctg gagactccac
540
agccccaccc aggtggagga cgccatgctg acacctacg acctggtata tgagcaggcg
600
atgaaaggta cgtcccacgt ccggcggcag gagctggcgg ccatccagga cgtgtttctg
660
tgctgtggga agaagtctcc tttcagccgt ctggggagca cagaggctga cctgtgtcag
720
ggagaggagg cggcgagaga ggactgcctt cagggcatcc ggagcttcct gaggacacac
780
cagcaggtcg cctccagcct gaccagcatc ggcctggccc tcacggtgtc cgccttgctc
840
ttcagctcct tcctgtggtt tgccatccgc tgtggctgca gcttggaccg caagggcaaa
900
tacaccctga ccccacgagc atgtggccgc cagccccagg agcccagcct cttgagatgc
960
tcccagggtg acccacaca ttgtctccac tccgaagcag ttgctattgg tccaagagga
1020
tgctcgggta gtcttcggtg gctgcaggag agcgatgctg cgcctctgcc cctctcctgc
1080
cacctggctg cccacagagc tctccagggc agaagtcgcg gtgggctcag tgggtgccct
1140
gagcggggtc tctcagactg acgtcaggcc ttggtgggct gcactctcac ctggaggctc
1200
cggggaagca tctgcctcca ggaccattca ggctgttgac aagtcaactc ctcatggctg
1260
taggactgag gttcccaagt ccttgtccct ggtcctgtgg tccctccacc ttcaaaccag
1320
caatggtgca ttgagcaaat tgtggtcaaa tatacatcac atcaaattta ccatcttaaa
1380
aaaa
1384


<210> 6208
<211> 290
<212> PRT
<213> Homo sapiens

<400> 6208
Met Val Thr Leu Thr Tyr Phe Gly Ala His Phe Ala Val Ile Arg Arg
1               5                   10                  15
Ala Ser Leu Glu Lys Asn Pro Tyr Gln Ala Val His Gln Trp Ala Phe
            20                  25                  30
Ser Ala Gly Leu Ser Leu Val Gly Leu Leu Thr Leu Gly Ala Val Leu
        35                  40                  45
Ser Ala Ala Ala Thr Val Arg Glu Ala Gln Gly Leu Met Ala Gly Gly
    50                  55                  60
Phe Leu Cys Phe Ser Leu Ala Phe Xaa Ala Gln Val Gln Val Val Phe
65                  70                  75                  80
Trp Arg Leu His Ser Pro Thr Gln Val Glu Asp Ala Met Leu Asp Thr
```

```
                    85               90                95
Tyr Asp Leu Val Tyr Glu Gln Ala Met Lys Gly Thr Ser His Val Arg
            100             105             110
Arg Gln Glu Leu Ala Ala Ile Gln Asp Val Phe Leu Cys Cys Gly Lys
            115             120             125
Lys Ser Pro Phe Ser Arg Leu Gly Ser Thr Glu Ala Asp Leu Cys Gln
            130             135             140
Gly Glu Glu Ala Ala Arg Glu Asp Cys Leu Gln Gly Ile Arg Ser Phe
145             150             155             160
Leu Arg Thr His Gln Gln Val Ala Ser Ser Leu Thr Ser Ile Gly Leu
            165             170             175
Ala Leu Thr Val Ser Ala Leu Leu Phe Ser Ser Phe Leu Trp Phe Ala
            180             185             190
Ile Arg Cys Gly Cys Ser Leu Asp Arg Lys Gly Lys Tyr Thr Leu Thr
            195             200             205
Pro Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro Ser Leu Leu Arg Cys
210             215             220
Ser Gln Gly Gly Pro Thr His Cys Leu His Ser Glu Ala Val Ala Ile
225             230             235             240
Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp Leu Gln Glu Ser Asp
            245             250             255
Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala Ala His Arg Ala Leu
            260             265             270
Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys Pro Glu Arg Gly Leu
            275             280             285
Ser Asp
    290
```

```
<210> 6209
<211> 2269
<212> DNA
<213> Homo sapiens
```

```
<400> 6209
ggcaggctgg gaattagcca gcaaagatgc cgatgaggtc atcaagcaga aggaaatctc
60
acccacacca ggtggactta caaggctgtg tgtgccctgg gcagggtgga catgtccagg
120
gcggggaaac cctggatatt tcactctgaa gtggtttctt gaaagaaaac tcaactgact
180
caggccatga gcatctttta cactgaagca agcatctcct cacaagtgcc tcctacaagt
240
cactagagtc atattcaaca ttacaaaatg cagtgctact taaattttaa agcactgagg
300
gaccaagaaa tgggctgatc aagtccttgg ccactcactg ttaagagcca ggatttacag
360
atcaatgact gttcctattg tccaagaaat aattttctag caaagcatac acactttatt
420
aaatttcaca gccagcagcg ctttcagtcc acaacagatt tctcagagga aacatggata
480
ttttgcgtag gcagaaacag tgaggagtac aaagcaaagc tataaatacc accaatggtt
540
ctgctatgtg catccgatat ttttttgcccg atctgaaata ctgcaagggc ttaaccattc
600
```

```
aaacaccgca tgacaacgaa cccagtggac tgtgaaactc aggctgcagg agggtggctt
660
gtcagctggt gaagccactt ggctttggac tccatcggtc atctttacgc aagagcagag
720
atgaacggtg ggtcacggct atgacgtgaa ggagaaagag aagacacact cacagaacag
780
gatggagagc ttcaataatt ttttaaaagc ttggaaccac cacctgcttt cccaatcttg
840
ggctggggtt ttgacttttc ttgatcatca atctgacttg aagcctttta ccagttacaa
900
tacagacatg gccagatgac ctgcttgtta ggaaggctgt ggccatcttt gtttctgaaa
960
cagtcttatc tcatctgtcc actgctgctc tggaagggtc aggaccagca ctgcagacac
1020
tcggccatgc tgtgagtgag cccagacata cgcgtggaat ctgaacaccc aacgctggcg
1080
ttcccgtgcc agtctgaggg ctgcggctcc agcgcttgtc cacacacacg cctgcctctc
1140
tctagttcct ccactgcctg gcttcctcgc ttgcaaaacc cagcatgtga aatgaggaca
1200
cctccacgga gacccttccg agcagggagg tttcatcaca cctttcgttc ttgccaagga
1260
gtctatcgcc tcatccacaa catctgcttg cgggagaaac agcaaatgtg tccctctgag
1320
ggaaggactg aggagggctt tggtagtcac agattgagac acatttctgc gaaaactggt
1380
attatgtttc tgcacaggaa aacaaagtgt taaaaatatt cccatcctcc ctccaactcc
1440
cttctgtcac acagtcccaa gtgaacttga aaaaggtcca gaagtgaaca cttagggtgc
1500
atttaccttt ctcctgaaga tgggaagaca cacggatgct tgcctaaaat atctgccgag
1560
aggtgagcag ctgtggcctg ggaaggcgct tgctcttcct ccacatcagc cagaaggcag
1620
atcacacctt cagagcaccc tacagaaccc agatggcgaa tcaaagtgca gaaaaagaac
1680
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1740
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1800
cctgtggttt ctgcctgacc cttctaagcc agaggtgaga aaacaactcc cagagaccac
1860
gactctcacc ctcggaggta cctgttcccc tgcaggtgtg gctctctgac aacccctagg
1920
caggggtggg ctccagcttt tggaagcaac cctacctagc tggcccccca agcattaaga
1980
agcttccctg atggggccat gtttttggtct cctttttaagc cctcagtcac aatgtacctt
2040
ctgagcttgt cctactattc agatgatttt ctctctgagt tgcaatactg ctcaatttag
2100
gtggctacct gtgttcattc aagctctgga agtgtggaag ggaacttaat cattgagttt
2160
ctgtgaagta ttttgccatc ctaaaatccc tgagagtgaa actgttgaat catgctcact
2220
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ttcttcacat acatactctt ggactatggg gaccaagtct gttgaattc
2269

<210> 6210
<211> 165
<212> PRT
<213> Homo sapiens

<400> 6210
Met Gly Ile Phe Leu Thr Leu Cys Phe Pro Val Gln Lys His Asn Thr
1   5   10   15
Ser Phe Arg Arg Asn Val Ser Gln Ser Val Thr Thr Lys Ala Leu Leu
            20   25   30
Ser Pro Ser Leu Arg Gly Thr His Leu Leu Phe Leu Pro Gln Ala Asp
        35   40   45
Val Val Asp Glu Ala Ile Asp Ser Leu Ala Arg Thr Lys Gly Val Met
        50   55   60
Lys Pro Pro Cys Ser Glu Gly Ser Pro Trp Arg Cys Pro His Phe Thr
65   70   75   80
Cys Trp Val Leu Gln Ala Arg Lys Pro Gly Ser Gly Gly Thr Arg Glu
                85   90   95
Arg Gln Ala Cys Val Trp Thr Ser Ala Gly Ala Ala Ala Leu Arg Leu
            100   105   110
Ala Arg Glu Arg Gln Arg Trp Val Phe Arg Phe His Ala Tyr Val Trp
        115   120   125
Ala His Ser Gln His Gly Arg Val Ser Ala Val Leu Val Leu Thr Leu
        130   135   140
Pro Glu Gln Gln Trp Thr Asp Glu Ile Arg Leu Phe Gln Lys Gln Arg
145   150   155   160
Trp Pro Gln Pro Ser
                165

<210> 6211
<211> 2163
<212> DNA
<213> Homo sapiens

<400> 6211
ngccgcccgc ctcagcccaa catggcgatg cacaacaagg cggcgccgcc gcagatcccg
60
gacacccggc gggagctggc ggagctcgtg aaggggaagc aggagctggc ggaaacattg
120
gcaaatttgg agcgacagat ctatgctttt gagggaagct acctggaaga cactcagatg
180
tatggcaata ttattcgtgg ctggngatcg gtatctgacc aaccannaaa aaactccaat
240
agcaaaaatg atcgaaggaa ccggaagttt aaggaagctg agcggctctt cagtaaatcc
300
tcggttacct cagcagctgc agtaagtgca ttggcaggag ttcaggacca gctcattgaa
360
aagagggagc caggaagtgg gacggaaagt gacacttctc cagacttcca caatcaggaa
420
aatgagccca gccaggagga ccctgaggat ctggatggat ctgtgcaggg agtgaaacct
480

5394

```
cagaaggctg cttcttctac ttcctcaggg agtcaccaca gcagccataa aaagcgaaag
540
aataaaaacc ggcacagccc gtctggcatg tttgattatg actttgagat tgatctgaag
600
ttaaacaaaa aaccacgagc tgactattag aagacacatt agtgcagaag cttccaggct
660
gtagagccct gcttcccttc tctgacctca caaagataaa catccttcac ctgagttcgt
720
ggccatccac ctctgctctc ccagacccag tgcctgtgac tttgagtagt ttgttctaaa
780
tgtggtgaca aacaagtcat ttctgtaaga cattgggtct tactttatgt gatttttagt
840
aacagaactg caggaagatc aagacaatgt tgtaatcccg caagttgct aactgtgcgt
900
ttctcccttc ttagaatgaa tgtctccccc aaaactggct ggcaccagct tcatctgtga
960
tacccttcaa gaaatgttct ctggttttgt tttatgctga aagtagaaca caagtcacat
1020
ttcagatgga ggctgtaaat atctggcatt ttcttatatt gttttatgtt ttcttgtttt
1080
tctcttgttg tttttatctt attttctttg gggttttttt gtaatgcctt tgtacagctc
1140
atactttcct gctgacatat ctgatcatct ctttcatgca gttgccaata ttcataactg
1200
aaaataatct ggtttatcat aagtaaaatg ggaaacttgc ctctgttttt tgcaagggga
1260
ggtaaagagt gtttagtaat tacctatctt aaatctttct gagttggtag tagattcatg
1320
ttcaaggaac aggaaaaatg gaaaaacata agtttaaatc agttcttttt aaataacttt
1380
ttattctttt gtataaataa aatttcacag gcttcaaatt ctcatgcttt acttttaaac
1440
ccgagattgt tttttttcact tatttattca tatcatgcct tatggaaatt tcttttttctg
1500
tattttctct ctttgctggt attcacctga ttaaatattg ctctaaaaat caccatggca
1560
tatggaaagt ctcaaaatta taccaaaagt gataacttat gtcgttctta agtggagtga
1620
aaggatagca tcagtgatag ccagtgttgc ccaccaggtc tccctttctt ggagggcttg
1680
ttggggctga ggaatctgct agtaatcgtt acctgcctct agtgctgtgg tgaacttgcg
1740
acagggtctg gctgcacatt ggaatcacct gagaagcttt aaaatactca tgcctggatc
1800
ccatccctag agactggggt acagcctagt tattgggaat ttctttaaaa gagttcctgg
1860
gattctgata agaagccagg ttgagaacca ctacattaga agactgaatg gtttaattta
1920
catcctatgt tatgattggt ccaagggata agatttgggg tctaaccttt cctttcactc
1980
tagttagtca tagtccttga cttatgccta tatctttgta agaaatagta tgtttcattt
2040
gtgatagtat tggtagggct gaatatggat ggcatctact gtaaaacaag tctaccttgt
2100
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cagatgtgca aaagctttca ctcttgttct caaataaact tttgtgggtt tttttaaaaa
2160
aaa
2163

<210> 6212
<211> 209
<212> PRT
<213> Homo sapiens

<400> 6212
Xaa Arg Pro Pro Gln Pro Asn Met Ala Met His Asn Lys Ala Ala Pro
1   5   10   15
Pro Gln Ile Pro Asp Thr Arg Arg Glu Leu Ala Glu Leu Val Lys Gly
            20   25   30
Lys Gln Glu Leu Ala Glu Thr Leu Ala Asn Leu Glu Arg Gln Ile Tyr
        35   40   45
Ala Phe Glu Gly Ser Tyr Leu Glu Asp Thr Gln Met Tyr Gly Asn Ile
    50   55   60
Ile Arg Gly Trp Xaa Ser Val Ser Asp Gln Pro Xaa Lys Asn Ser Asn
65   70   75   80
Ser Lys Asn Asp Arg Arg Asn Arg Lys Phe Lys Glu Ala Glu Arg Leu
                85   90   95
Phe Ser Lys Ser Ser Val Thr Ser Ala Ala Ala Val Ser Ala Leu Ala
            100   105   110
Gly Val Gln Asp Gln Leu Ile Glu Lys Arg Glu Pro Gly Ser Gly Thr
        115   120   125
Glu Ser Asp Thr Ser Pro Asp Phe His Asn Gln Glu Asn Glu Pro Ser
    130   135   140
Gln Glu Asp Pro Glu Asp Leu Asp Gly Ser Val Gln Gly Val Lys Pro
145   150   155   160
Gln Lys Ala Ala Ser Ser Thr Ser Ser Gly Ser His His Ser Ser His
            165   170   175
Lys Lys Arg Lys Asn Lys Asn Arg His Ser Pro Ser Gly Met Phe Asp
            180   185   190
Tyr Asp Phe Glu Ile Asp Leu Lys Leu Asn Lys Lys Pro Arg Ala Asp
        195   200   205
Tyr

<210> 6213
<211> 1160
<212> DNA
<213> Homo sapiens

<400> 6213
acgcgtgaag ggaagggggaa agaggtcacc aagggcagag gtgtccaggc cggagccagg
60
ggccccactg ttgggatgct ggctgcagtg gggcgcccca agcccaggtc ccctctgtct
120
tctctttcga ctttgcagct gtacttgttt tgctcctcta cccgcaggag ctgacatgga
180
cccaaatcct cgggccgccc tggagcgcca gcagctccgc cttcgggagc ggcaaaaatt
240

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cttcgaggac attttacagc cagagacaga gtttgtcttt cctctgtccc atctgcatct
300
cgagtcgcag agaccccca taggtagtat ctcatccatg gaagtgaatg tggacacact
360
ggagcaagta gaacttattg accttgggga cccggatgca gcagatgtgt tcttgccttg
420
cgaagatcct ccaccaaccc cccagtcgtc tggggtggac aaccatttgg aggagctgag
480
cctgccnggt gcctacatca gacaggacca catctaggac ctcctcctcc tcctcctccg
540
actcctccac caacctgcat agcccaaatc caagtgatga tggagcagat acgcccttgg
600
cacagtcgga tgaagaggag gaaaggggtg atggaggggc agagcctgga gcctgcagct
660
agcagtgggc ccctgcctac agactgacca cgctggctat tctccacatg agaccacagg
720
cccagccaga gcctgtcggg agaagaccag actctttact tgcagtaggc accagaggtg
780
ggaaggatgg tgggattgtg tacctttcta agaattaacc ctctcctgct ttactgctaa
840
ttttttcctg ctgcaaccct cccaccagtt tttggcttac tcctgagata tgatttgcaa
900
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960
cccctaaacc atcccgtagt cttctaatac agtctctcag acaagtgtct ctagatggat
1020
gtgaactcct taactcatca agtaaggtgg tactcaagcc atgctgcctc cttacatcct
1080
ttttggaaca gagcacggta taaataataa actaataata atatgccaac aaaaaaaaaa
1140
aaaaaaaaaa aaaaaaaaaa
1160
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<210> 6214
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6214
Pro Trp Gly Pro Gly Cys Ser Arg Cys Val Leu Ala Leu Arg Arg Ser
1               5                   10                  15
Ser Thr Asn Pro Pro Val Val Trp Gly Gly Gln Pro Phe Gly Gly Ala
            20                  25                  30
Glu Pro Ala Xaa Cys Leu His Gln Thr Gly Pro His Leu Gly Pro Pro
            35                  40                  45
Pro Pro Pro Pro Pro Thr Pro Pro Pro Thr Cys Ile Ala Gln Ile Gln
        50                  55                  60
Val Met Met Glu Gln Ile Arg Pro Trp His Ser Arg Met Lys Arg Arg
65                  70                  75                  80
Lys Gly Val Met Glu Gly Gln Ser Leu Glu Pro Ala Ala Ser Ser Gly
                85                  90                  95
Pro Leu Pro Thr Asp
            100
```

<210> 6215
<211> 651
<212> DNA
<213> Homo sapiens

<400> 6215
ncagctccat aatcccctcc agaacattct gcaacagccc catgatcccc tctagaacat
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tccacaatag cctcacaggt cccctgtaga acattccacc acagccccat gatccccttg
120
ctcctcagag catgtggccg ccagccccag gagcccagcc tcttgagatg ctcccagggt
180
ggacccacac attgtctcca ctccgaagca gttgctattg gtccaagagg atgctcgggt
240
agtcttcggt ggctgcagga gagcgatgct gcgcctctgc ccctctcctg ccacctggct
300
gcccacagag ctctccaggg cagaagtcgc ggtgggctca gtgggtgccc tgagcggggt
360
ctctcagact gacgtcaggc cttggtgggc tgcactctca cctggaggct ccggggaagc
420
atctgcctcc aggaccattc aggctgttga caagtcaact cctcatggct gtaggactga
480
ggttcccaag tccttgtccc tggtcctgtg gtccctccac cttcaaacca gcaatggtgc
540
attgagcaaa ttgtggtcaa atatacatca catcaaattt accatcttaa ccattgttaa
600
gtgtatggtt tgtggcatta aatacattca cattgttgtg caaccatcac c
651

<210> 6216
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6216
Met Ile Pro Leu Leu Leu Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro
1   5   10   15
Ser Leu Leu Arg Cys Ser Gln Gly Gly Pro Thr His Cys Leu His Ser
            20   25   30
Glu Ala Val Ala Ile Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp
        35   40   45
Leu Gln Glu Ser Asp Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala
    50   55   60
Ala His Arg Ala Leu Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys
65   70   75   80
Pro Glu Arg Gly Leu Ser Asp
                85

<210> 6217
<211> 2955
<212> DNA
<213> Homo sapiens

<400> 6217

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ngcagcgggg aggcgggagc cgcgggcgga gccgcccggc gaggcgtggg ggctgcgggg
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ccggcccatc cgtgggggcg acttgagcgt tgagggcgcg cggggaggcg agccaccatg
120
ttcagccagc agcagcagca gcagctccag caacagcagc agcagctcca gcagttacag
180
cagcagcagc tccagcagca gcaattgcag cagcagcagt tactgcagct ccagcagctg
240
ctccagcagt ccccaccaca ggccccgttg cccatggctg tcagccgggg gctcccccccg
300
cagcagccac agcagccgct tctgaatctc cagggcacca actcagcctc cctcctcaac
360
ggctccatgc tgcagagagc tttgctttta cagcagttgc aaggactgga ccagtttgca
420
atgccaccag ccacgtatga cactgccggt ctcaccatgc ccacagcaac actgggtaac
480
ctccgaggct atggcatggc atccccaggc ctcgcagccc ccagcctcac accccacaa
540
ctggccactc caaatttgca acagttcttt ccccaggcca ctcgccagtc cttgctggga
600
cctcctcctg ttggggtccc catgaaccct tcccagttca acctttcagg acggaacccc
660
cagaaacagg cccggacctc ctcctctacc accccaatc gaaaggattc ttcttctcag
720
acaatgcctg tggaagacaa gtcagacccc cagagggt ctgaggaagc cgcagagccc
780
cggatggaca caccagaaga ccaagattta ctgccctgcc cagaggacat cgccaaggaa
840
aaacgcactc cagcacctga gcctgagcct tgtgaggcgt ccgagctgcc agcaaagaga
900
ttgaggagct cagaagagcc cacagagaag gaacctccag ggcagttaca ggtgaaggcc
960
cagccgcagg cccggatgac agtaccgaaa cagacacaga caccagacct gctgcctgag
1020
gccctggaag cccaagtgct gccacgattc cagccacggg tcctgcaggt ccaggcccag
1080
gtgcagtcac agactcagcc gcggatacca tccacagaca cccaggtgca gccaaagctg
1140
cagaagcagg cgcaaacaca gacctctcca gagcacttag tgctgcaaca gaagcaggtg
1200
cagccacagc tgcagcagga ggcagagcca cagaagcagg tgcagccaca ggtacagcca
1260
caggcacatt cacagggccc aaggcaggtg cagctgcagc aggaggcaga gccgctgaag
1320
caggtgcagc cacaggtgca gccccaggca cattcacagc ccccaaggca ggtgcagctg
1380
cagctgcaga agcaggtcca gacacagaca tatccacagg tccacacaca ggcacagcca
1440
agcgtccagc cacaggagca tcctccagcg caggtgtcag tacagccacc agagcagacc
1500
catgagcagc ctcacaccca gccgcaggtg tcgttgctgg ctccagagca aacaccagtt
1560
gtggttcatg tctgcgggct ggagatgcca cctgatgcag tagaagctgg tggaggcatg
1620
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gaaaagacct tgccagagcc tgtgggcacc caagtcagca tggaagagat tcagaatgag
1680

tcggcctgtg gcctagatgt gggagaatgt gaaaacagag cgagagagat gccaggggta
1740

tggggcgccg ggggctccct gaaggtcacc attctgcaga gcagtgacag ccgggccttt
1800

agcactgtac ccctgacacc tgtcccccgc cccagtgact ccgtctcctt cacccctgcg
1860

gctaccagca ctccctctaa gcaggccctc cagttcttct gctacatctg caaggccagc
1920

tgctccagcc agcaggagtt ccaggaccac atgtcggagc ctcagcacca gcagcggcta
1980

ggggagatcc agcacatgag ccaagcctgc ctcctgtccc tgctgcccgt gccccgggac
2040

gtcctggaga cagaggatga ggagcctcca ccaaggcgct ggtgcaacac ctgccagctc
2100

tactacatgg gggacctgat ccaacaccgc aggacacagg accacaagat tgccaaacaa
2160

tccttgcgac ccttctgcac cgtttgcaac cgctacttca aaacccctcg caagtttgtg
2220

gagcacgtga agtcccaggg gcataaggac aaagccaagg agctgaagtc gcttgagaaa
2280

gaaattgctg ccaagatga ggaccacttc attacagtgg acgctgtggg ttgcttcgag
2340

ggtgatgaag aagaggaaga ggatgatgag gatgaagaag agatcgaggt tgaggaggaa
2400

ctctgcaagc aggtgaggtc cagagatata tccagagagg agtggaaggg ctcggagacc
2460

tacagcccca atactgcata tggtgtggac ttcctggtgc ccgtgatggg ctatatctgc
2520

cgcatctgcc acaagttcta tcacagcaac tcagggggcac agctctccca ctgcaagtcc
2580

ctgggccact ttgagaacct gcagaaatac aaggcggcca agaaccccag ccccaccacc
2640

cgacctgtga gccgccggtg cgcaatcaac gcccggaacg ctttgacagc cctgttcacc
2700

tccagcggcc gcccaccctc ccagcccaac acccaggaca aacacccag caaggtgacg
2760

gctcgaccct cccagccccc actacctcgg cgctcaaccc gcctcaaaac ctgatagagg
2820

gacctccctg tccctggcct gcctgggtcc agatctgcta atgctttta ggagtctgcc
2880

tggaaacttt gacatggttc atgtttttac tcaaaatcca ataaaacaag gtagtttggc
2940

aaaaaaaaaa aaaaa
2955

<210> 6218
<211> 133
<212> PRT
<213> Homo sapiens

<400> 6218
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr

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  1                5                    10                     15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
                20                    25                     30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
            35                    40                     45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
        50                    55                     60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65                      70                    75                     80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85                    90                     95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100                   105                    110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
            115                   120                    125
Thr Arg Leu Lys Thr
            130
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<210> 6219
<211> 2495
<212> DNA
<213> Homo sapiens

<400> 6219
tttttttttt tttttccgcg gtggaggatc aggtttaatg gtcactatga gggtatcgta
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catcgttcca agcccggccc ccgccccagc cctccctcag ctgggaacac agccaggtgc
120
cctcagaccc ctggctctgc acaagggggg cctgccccct cgccccagnn ctatatacac
180
gacagcccat cctgctggcc gtggacaaaa gctgggagct ccntgtgccc agtcaggagc
240
ccctacagtc caccagctgc gcggccgggt ccagggngcc cactgtggtg ccagcgagtt
300
tctcaaaacc cagggcccag ccccagcnnt gggcccctgc caagccccag gcctgtgtgc
360
tgggatggag cctccacact gaggctggta aaagctgaac tcaacagcag caatgagagt
420
gctgggtggg cttggggggga tggggagcag gccccaccca gagcctcctc tgaaggaggg
480
gacgctgcgc ccttccttcc tgctgcccag actgccccta ccgggtccgg cgccggctga
540
ggtctaagta agcagggatg gggggtggca agaggagtgt aagtgaaagc acagacagtc
600
ggagactcgg ccagtgtaga cagacccaga gactcggcca gtgtagacag agccaggctg
660
ggcagcccgg cgacgctggc cccacgcaca cgggccaccc tggtgctggt gatcgatacg
720
gcagggaggg ggtgggcagg gagggtcctg aacacatgtg ggctgctggg ctgctgggcc
780
ggggtgccta cactgtaact agcagcatag tgcttaacta gttaacaaga aatgctgctt
840
cccttttgaat tgtttcgggg gtgtagaaat tgcacttatt tctatgaacc ccatggaggg
900
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atgcccacag ctgagcctcc aggcgaggca tggcaggtca gtgcctggcc gctgagcatc
960
cacgggccac agggcgggat cctcccggcc cccagggact gcagcctctg cggccacggg
1020
tgcagcgagg accggaaccc acaggggggaa cctgagcaac gtctgaggtg ccctgaagtg
1080
gctccaggcg agaccggagc cacacagtcc cggggagcac gaggcggccc agccccaggt
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cccggtgcag agggagtggc ctgatggtga ctgggcggag gcctctgccc ctcacaggac
1200
gtcgtcaaag tccagcagct tcgagtgctg gcggctcttc cacaggcgat acaaccggaa
1260
gtcaaagtac gtctcgatca tctgcttccc ttgggctgag agctccaggg gtgactcgaa
1320
ggtgacccta taaggagtca tgagggtcct gaggttctgg aacagcttct ctccattggg
1380
gttccccaga atgtagcagc ccatgatgtg gatgacgttc ggctctgggt tcactttgct
1440
catcaggcgg ctcagccgct tccagaagtg aatcatgtcc tcttccttct ccactttggc
1500
aaaggtggcc accttgttct tgaggagata gaggtgtcca ggacctccct ggcagaaaat
1560
cagcattttc cagatcttgg ctcccttgtg gtagacgttc agcttcctct ctatctcctc
1620
aaggatgtcc tcgaaggttg cgtgctcatg gtcgtagagg atggggatga tggaggggtc
1680
atcccggcgg atgatagtgg ggatgtactc agccttgggc accttggagg aaatgagcat
1740
gacctttggt ggcacgaagc cttcggtgtc gcaggccaca gcctccaggc ccttctcagt
1800
gtcccagtcc aggtcctcga aggcctcgtc cagcgtgcag tgggagctct gcaggtcact
1860
gctgtctcgg gagtcgtggg aagtgtcggc tttcatgggg gtggggtcgc tccaggaccg
1920
gctgaagctc cgctcgcgcg ctcagcgaac gtctgggcct tacaccctcc ggctgccgac
1980
catgcgcagg tgtttgcgga agttcctctg gattacagac gcggaatcat tctcccgttt
2040
ccggcgcttc ctctccgcgt agcccctgaa caccgagatg gcttgcatag ttgtggttgc
2100
tgtctggaag ctgaaaagat tttccttggg gaaccaggta cgaatgggaa tgtcgtcaga
2160
cacacggtca acgctgtaca tcctctccag cttcttgcgg cgaccggagg tctcaggcag
2220
aggtggctgg tccagcccaa aggcccgagg ggtggggcca ggagccagct gggcacatac
2280
cggggcactc ccttggagcc cctggcgngc tgcccgccca gctttctggc agggcctgct
2340
gacgtcctcc cggctgccac cagggctggc gcgcaggggc tggctgtgat ggtgagggtg
2400
ccgctgccgc cgccccttca ccaccgccag ctcaatggcc tccgcctcag gctgggcag
2460
cagggcaggc tccccagaga tgaagtacac tcgag
2495
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5402

<210> 6220
<211> 179
<212> PRT
<213> Homo sapiens

<400> 6220
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Phe Phe Phe Phe Phe Ser Arg Trp Arg Ile Arg Phe Asn Gly His Tyr
1               5                   10                  15
Glu Gly Ile Val His Arg Ser Lys Pro Gly Pro Arg Pro Ser Pro Pro
            20                  25                  30
Ser Ala Gly Asn Thr Ala Arg Cys Pro Gln Thr Pro Gly Ser Ala Gln
        35                  40                  45
Gly Gly Pro Ala Pro Ser Pro Gln Xaa Tyr Ile His Asp Ser Pro Ser
    50                  55                  60
Cys Trp Pro Trp Thr Lys Ala Gly Ser Ser Xaa Cys Pro Val Arg Ser
65                  70                  75                  80
Pro Tyr Ser Pro Pro Ala Ala Arg Pro Gly Pro Gly Xaa Pro Leu Trp
                85                  90                  95
Cys Gln Arg Val Ser Gln Asn Pro Gly Pro Ser Pro Ser Xaa Gly Pro
            100                 105                 110
Leu Pro Ser Pro Arg Pro Val Cys Trp Asp Gly Ala Ser Thr Leu Arg
        115                 120                 125
Leu Val Lys Ala Glu Leu Asn Ser Ser Asn Glu Ser Ala Gly Trp Ala
    130                 135                 140
Trp Gly Asp Gly Glu Gln Ala Pro Pro Arg Ala Ser Ser Glu Gly Gly
145                 150                 155                 160
Asp Ala Ala Pro Phe Leu Pro Ala Ala Gln Thr Ala Pro Thr Gly Ser
                165                 170                 175
Gly Ala Gly
```

<210> 6221
<211> 1487
<212> DNA
<213> Homo sapiens

<400> 6221
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nnctgcagga aaaagtgctg ctctgacgca gatgctctag tgttttctaa gtgacagctc
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ttagggcacc ctggatgccc cttgattcca ccctcattac ttgtcctctc tcggtgctgc
120
ctcttgttcc cttgctttgt tttgttttca tattactccc gtatttcctg acatatctgc
180
attttctac ttactgtgtc ccgatgcagc tgctcctgtt tttcacatcc aaggtttctc
240
ctccatggca ctactgacgt tttgggctga cgaattcttt ggggacagga tggggcatgt
300
cctgtgcatt ttaggatgtt gagtagcagc cctggcctgc atccactaga tgccagttga
360
acctccccag gttctgaagc cagacacaag atgaaaaagc taactccaaa acagaaattt
420
tctgaagatt tagagtcata taagatatca gtggtaatgc aggaatcagc tgagaaactt
480
```

```
tcagaaaagt tacataagtg taaagaattt gtggacagtt gcaggcttac tttccctact
540
agtggtgatg aatacagcag gggcttcctt caaaacctta accttattca agatcagaat
600
gcgcaaacaa ggtggaagca gggcagatat gatgaggatg gcaaaccctt caatcaaaga
660
tctttgcttt tggggcatga gcgaattctc acaagagcaa agtcttatga atgcagtgaa
720
tgtggaaaag tcattaggcg taaggcatgg tttgatcaac atcaaagaat tcactttta
780
gagaatcctt ttgagtgtaa ggtctgtggg caagccttca gacagcggtc agctcttacg
840
gtccataaac agtgtcacct gcaaaacaag ccatacagat gtcatgactg tggaaagtgt
900
tttcggcagc tcgcgtatct tgttgaacat aagaggattc acaccaaaga aaaaccttat
960
aaatgtagca aatgtgaaaa aacgtttagt cagaattcaa cccttattcg acatcaggtg
1020
atccatagtg gagaaaaacg ccataaatgc cttgagtgtg aaaagccctt ggccggcat
1080
tcaacccttc tatgtcatca acagattcac agtaaaccga cacccataa atgcagtgaa
1140
tgtggacagt cctttggtag gaatgtggat ctcattcagc atcaaagaat ccatacaaag
1200
gaggaattct ttcaatgtgg agaatgtggg aaaacgttta gttttaagag gaatctttt
1260
cgacatcagg tcattcacac tggaagccaa ctctaccaat gtgtcatatg tggaaaatct
1320
ttcaagtggc acacaagctt tattaagcac cagggcactc acaaaggaca gatatccaca
1380
tgatgttaat tggaaagcag tcattggaga actagaactt ataaacctct acttcaagtg
1440
tgtatcacgt aattgtttcc atgaaaagca taaatgtaa caaaggg
1487


<210> 6222
<211> 330
<212> PRT
<213> Homo sapiens

<400> 6222
Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser
1               5                   10                  15
Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu
            20                  25                  30
Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe
            35                  40                  45
Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn
        50                  55                  60
Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr
65                  70                  75                  80
Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His
                85                  90                  95
Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly
```

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                   100                    105                    110
      Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His
               115                    120                    125
      Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg
           130                    135                    140
      Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
      145                    150                    155                    160
      Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Tyr
                       165                    170                    175
      Leu Val Glu His Lys Arg Ile His Thr Lys Glu Lys Pro Tyr Lys Cys
                   180                    185                    190
      Ser Lys Cys Glu Lys Thr Phe Ser Gln Asn Ser Thr Leu Ile Arg His
                   195                    200                    205
      Gln Val Ile His Ser Gly Glu Lys Arg His Lys Cys Leu Glu Cys Gly
           210                    215                    220
      Lys Ala Phe Gly Arg His Ser Thr Leu Leu Cys His Gln Gln Ile His
      225                    230                    235                    240
      Ser Lys Pro Asn Thr His Lys Cys Ser Glu Cys Gly Gln Ser Phe Gly
                       245                    250                    255
      Arg Asn Val Asp Leu Ile Gln His Gln Arg Ile His Thr Lys Glu Glu
                   260                    265                    270
      Phe Phe Gln Cys Gly Glu Cys Gly Lys Thr Phe Ser Phe Lys Arg Asn
                   275                    280                    285
      Leu Phe Arg His Gln Val Ile His Thr Gly Ser Gln Leu Tyr Gln Cys
           290                    295                    300
      Val Ile Cys Gly Lys Ser Phe Lys Trp His Thr Ser Phe Ile Lys His
      305                    310                    315                    320
      Gln Gly Thr His Lys Gly Gln Ile Ser Thr
                       325                    330
```

```
<210> 6223
<211> 944
<212> DNA
<213> Homo sapiens

<400> 6223
accccacccc tcactgtgca ccccccaccc tccacccaca cccccatccc cacctgcacc
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ccaccccaca ctcacaaccc cccactccca cctgcaacac ccccactccc cacccgcacc
120
ccccaacttc ccatccccc actcctctcc attccctctc ttgcttgtgc gcataagcaa
180
gtcccactca ttgcaactgt aaccaatacc aagcatgaga acaggaacta gctccaccct
240
ctaaccccca ctccagctgc agacgccacg gagtttgtgc aggggcgcag cgctccagcc
300
atggcgcgtt cgctcgtcca cgacaccgtg ttctactgcc tgagtgtata ccaggtaaaa
360
ataagcccca cacctcagct gggggcagca tcaagcgcag aaggccatgt tggccaagga
420
gctccaggcc tcatgggtaa tatgaaccct gagggcggtg tgaaccacga gaacggcatg
480
aaccgcgatg gcggcatgat ccccgagggc ggcggtggaa accaggagcc tcggcagcag
540
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ccgcagcccc cgccggagga gccggcccag gcggccatgg agggtccgca gcccgagaac
600
atgcagccac gaactcggcg cacgaagttc acgctgttgc aggtggagga gctggaaagt
660
gttttccgac acactcaata ccctgatgtg cccacaagaa gggaacttgc cgaaaactta
720
ggtgtgactg aagacaaagt gcgggtcagt acacttgaaa aagcaatttg agaggacagc
780
cattctaaaa cctgcttcag ggcattgaag gctttgaagg ctttgtcctg aacgttctaa
840
agttgttgtt tttattattg tctttttttat gttgacaaat aagtttttgaa gtttgggttc
900
cttgtcggta gaaaaggaag taagctccag cttatggttc tttc
944

<210> 6224
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6224
Met Ala Arg Ser Leu Val His Asp Thr Val Phe Tyr Cys Leu Ser Val
1   5   10   15
Tyr Gln Val Lys Ile Ser Pro Thr Pro Gln Leu Gly Ala Ala Ser Ser
            20   25   30
Ala Glu Gly His Val Gly Gln Gly Ala Pro Gly Leu Met Gly Asn Met
        35   40   45
Asn Pro Glu Gly Gly Val Asn His Glu Asn Gly Met Asn Arg Asp Gly
    50   55   60
Gly Met Ile Pro Glu Gly Gly Gly Asn Gln Glu Pro Arg Gln Gln
65   70   75   80
Pro Gln Pro Pro Pro Glu Glu Pro Ala Gln Ala Ala Met Glu Gly Pro
                85   90   95
Gln Pro Glu Asn Met Gln Pro Arg Thr Arg Arg Thr Lys Phe Thr Leu
            100   105   110
Leu Gln Val Glu Glu Leu Glu Ser Val Phe Arg His Thr Gln Tyr Pro
        115   120   125
Asp Val Pro Thr Arg Arg Glu Leu Ala Glu Asn Leu Gly Val Thr Glu
    130   135   140
Asp Lys Val Arg Val Ser Thr Leu Glu Lys Ala Ile
145   150   155

<210> 6225
<211> 3851
<212> DNA
<213> Homo sapiens

<400> 6225
nggatccagc tgctgcgcag tcagaccca gctgcttttg agtcccgcct ggagaaacgc
60
agtgaatttc ggaagcagcc agtggggcat tccaggcaag gtgattttat caaatgtgtg
120
gaacagaaga cagatgcctt ggggaaacag tctgtgaaca gaggattcac taaggacaag
180

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actctcagtt caatctttaa cattgagatg gtaaaagaaa aaactgcaga agaaataaaa
240
cagatttggc agcaatattt tgcagcaaaa gatacagtct acgcagttat tcctgcagaa
300
aagtttgatt tgatctggaa ccgggctcag tcctgtccaa catttctatg tgctctgcca
360
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1620
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1680
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1800
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2100
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2160
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2220
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2280
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3180
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3240
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3300
gaaactttaa gatgcagtag catcacctaa agtgctttta aaatgcagat tctcaggcct
3360
caaccgtaca ccaccccccc acacacgtac taaatcaaga atatgtgcag aaggtactgg
3420
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gaatctactt gttaatatgt gctccaaatg attctgatgt aggtaattag ccagccacac
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3540
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3600
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3660
actgtgagct ccttgagggc caggacttat ctctgttcgc agtgccaagg acatggcctg
3720
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aaaaaaaaaa a
3851

<210> 6226
<211> 246
<212> PRT
<213> Homo sapiens

<400> 6226
Xaa Ile Gln Leu Leu Arg Arg Ser Asp Pro Ala Ala Phe Glu Ser Arg
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Leu Glu Lys Arg Ser Glu Phe Arg Lys Gln Pro Val Gly His Ser Arg
            20   25   30
Gln Gly Asp Phe Ile Lys Cys Val Glu Gln Lys Thr Asp Ala Leu Gly
            35   40   45
Lys Gln Ser Val Asn Arg Gly Phe Thr Lys Asp Lys Thr Leu Ser Ser
        50   55   60
Ile Phe Asn Ile Glu Met Val Lys Glu Lys Thr Ala Glu Glu Ile Lys
65   70   75   80
Gln Ile Trp Gln Gln Tyr Phe Ala Ala Lys Asp Thr Val Tyr Ala Val
                85   90   95
Ile Pro Ala Glu Lys Phe Asp Leu Ile Trp Asn Arg Ala Gln Ser Cys
            100   105   110
Pro Thr Phe Leu Cys Ala Leu Pro Arg Arg Glu Gly Tyr Glu Phe Phe
            115   120   125
Val Gly Gln Trp Thr Gly Thr Glu Leu His Phe Thr Ala Leu Ile Asn
        130   135   140
Ile Gln Thr Arg Gly Glu Ala Ala Ser Gln Leu Ile Leu Tyr His
145   150   155   160
Tyr Pro Glu Leu Lys Glu Glu Lys Gly Ile Val Leu Met Thr Ala Glu
                165   170   175
Met Asp Ser Thr Phe Leu Asn Val Ala Glu Ala Gln Cys Ile Ala Asn
                180   185   190
Gln Val Gln Leu Phe Tyr Ala Thr Asp Arg Lys Glu Thr Tyr Gly Leu
            195   200   205
Val Glu Thr Phe Asn Leu Arg Pro Asn Glu Phe Lys Tyr Met Ser Val
        210   215   220
Ile Ala Glu Leu Glu Gln Ser Gly Leu Gly Ala Glu Leu Lys Cys Ala
225   230   235   240
Gln Asn Gln Asn Lys Thr

245

<210> 6227
<211> 830
<212> DNA
<213> Homo sapiens

<400> 6227
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120
ccagggagag tcgctgcaga atgggaggta cagaatcgta tcccttctgg aactatatta
180
aaggccttga tggaaggtgg tgaaaatggg ccctggatga gatttatgag agcagaaata
240
acagcagagg gttttttacg agaatttggg agactttgct ctgaaatgtt aaagacctcc
300
gtgcctgtgg actcattttt ctctctgttg accagtgagc gagtggcaaa gcagttccca
360
gtgatgactg aggccataac tcaaattcgg gcaaaaggtc ttcagactgc agtcttgagc
420
aataattttt atcttcccaa ccagaaaagc tttttgcccc tggaccggaa acagtttgat
480
gtgattgtgg agtcctgcat ggaagggatc tgtaagccag accctaggat ctacaagctg
540
tgcttggagc agctcggcct gcagccctct gagtccatct ttcttgatga ccttggaaca
600
aatctaaaag aagctgccag acttggtatt cacaccatta aggttaatga cccagagact
660
gcagtaaagg aattagaagc tctcttgggt tttacattga gagtaggtgt tccaaacact
720
cggcctgtga aaaagacgat ggaaattccg aaagattcct tgcagaagta cctcaaagac
780
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830

<210> 6228
<211> 271
<212> PRT
<213> Homo sapiens

<400> 6228
Lys His Thr Gln Arg Arg His Gln Gly Ser His Arg Trp Thr His Leu
1   5   10   15
Gly Gly Ser Thr Tyr Arg Ala Val Ile Phe Asp Met Gly Gly Val Leu
            20   25   30
Ile Pro Ser Pro Gly Arg Val Ala Ala Glu Trp Glu Val Gln Asn Arg
        35   40   45
Ile Pro Ser Gly Thr Ile Leu Lys Ala Leu Met Glu Gly Gly Glu Asn
    50   55   60
Gly Pro Trp Met Arg Phe Met Arg Ala Glu Ile Thr Ala Glu Gly Phe
65   70   75   80
Leu Arg Glu Phe Gly Arg Leu Cys Ser Glu Met Leu Lys Thr Ser Val

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                    85                    90                    95
Pro Val Asp Ser Phe Phe Ser Leu Leu Thr Ser Glu Arg Val Ala Lys
                   100                   105                   110
Gln Phe Pro Val Met Thr Glu Ala Ile Thr Gln Ile Arg Ala Lys Gly
              115                   120                   125
Leu Gln Thr Ala Val Leu Ser Asn Asn Phe Tyr Leu Pro Asn Gln Lys
         130                   135                   140
Ser Phe Leu Pro Leu Asp Arg Lys Gln Phe Asp Val Ile Val Glu Ser
    145                   150                   155                   160
Cys Met Glu Gly Ile Cys Lys Pro Asp Pro Arg Ile Tyr Lys Leu Cys
                   165                   170                   175
Leu Glu Gln Leu Gly Leu Gln Pro Ser Glu Ser Ile Phe Leu Asp Asp
              180                   185                   190
Leu Gly Thr Asn Leu Lys Glu Ala Ala Arg Leu Gly Ile His Thr Ile
              195                   200                   205
Lys Val Asn Asp Pro Glu Thr Ala Val Lys Glu Leu Glu Ala Leu Leu
         210                   215                   220
Gly Phe Thr Leu Arg Val Gly Val Pro Asn Thr Arg Pro Val Lys Lys
    225                   230                   235                   240
Thr Met Glu Ile Pro Lys Asp Ser Leu Gln Lys Tyr Leu Lys Asp Leu
                   245                   250                   255
Leu Gly Ile Gln Thr Thr Gly Pro Leu Glu Leu Leu Gln Phe Asp
              260                   265                   270
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<210> 6229
<211> 3105
<212> DNA
<213> Homo sapiens

<400> 6229
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120
tgtgacgtcc ccaccaacgg ctgcggaccc gaccgctgga actccgcgtt cacccgcaaa
180
gacgagatca tcaccagcct cgtgtctgcc ttagactcca tgtgctcagc gctgtccaaa
240
ctgaacgccg aggtggcctg tgtcgccgtg cacgatgaga gcgcctttgt ggtgggcaca
300
gagaagggga gaatgttcct gaatgcccgg aaggagctac agtcagactt cctcaggttc
360
tgccgagggc ccccgtggaa ggatccggag gcagagcacc ccaagaaggt gcagcggggc
420
gagggtggag gccgtagcct ccctcggtcc tccctggaac atggctcaga tgtgtacctt
480
ctgcggaaga tggtagagga ggtgtttgat gttctttata gcgaggccct gggaagggcc
540
agtgtggtgc cactgcccta tgagaggctg ctcagggagc cagggctgct ggccgtgcag
600
gggctgcccg aaggcctggc cttccgaagg ccagccgagt atgaccccaa ggccctcatg
660
gccatcctgg aacacagcca ccgcatccgc ttcaagctca gagaggccact tgaggatggc
720
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gggcgggact cgaaggccct ggtggagctg aacggtgtct ccctgattcc caaggggtca
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840
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960
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aagcccactg ggcctggtgg gcctctcatc cagaacgtcc atgcctccaa gcgcattctc
1080
ttctccatcg tccatgacaa gtcagagaag tgggacgcct tcataaagga aaccgaggac
1140
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1200
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1320
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1380
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1440
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1620
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1980
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2040
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2100
ctgaagagac agggctttca agaaaattat gacgcgaggc tctcacggat cgacatcgcc
2160
aacacactaa gggagcaggt ccaggacctt ttcaataaga aatacgggga agccttgggc
2220
atcaagtacc cggtccaggt cccctacaag cggatcaaga gtaaccccgg ctccgtgatc
2280
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2340
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5412

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ctggagagga ttcttgctgt ggctgacaag atcaagttca cagtcaccag gcctttccaa
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2460
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2700
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2760
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2820
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3105
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<210> 6230
<211> 944
<212> PRT
<213> Homo sapiens
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<400> 6230
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Pro Asp Arg Trp Asn Ser Ala Phe Thr Arg Lys Asp Glu Ile Ile Thr
            20                  25                  30
Ser Leu Val Ser Ala Leu Asp Ser Met Cys Ser Ala Leu Ser Lys Leu
        35                  40                  45
Asn Ala Glu Val Ala Cys Val Ala Val His Asp Glu Ser Ala Phe Val
    50                  55                  60
Val Gly Thr Glu Lys Gly Arg Met Phe Leu Asn Ala Arg Lys Glu Leu
65                  70                  75                  80
Gln Ser Asp Phe Leu Arg Phe Cys Arg Gly Pro Pro Trp Lys Asp Pro
                85                  90                  95
Glu Ala Glu His Pro Lys Lys Val Gln Arg Gly Glu Gly Gly Gly Arg
            100                 105                 110
Ser Leu Pro Arg Ser Ser Leu Glu His Gly Ser Asp Val Tyr Leu Leu
        115                 120                 125
Arg Lys Met Val Glu Glu Val Phe Asp Val Leu Tyr Ser Glu Ala Leu
    130                 135                 140
Gly Arg Ala Ser Val Val Pro Leu Pro Tyr Glu Arg Leu Leu Arg Glu
145                 150                 155                 160
Pro Gly Leu Leu Ala Val Gln Gly Leu Pro Glu Gly Leu Ala Phe Arg
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5413

```
                     165                    170                    175
Arg Pro Ala Glu Tyr Asp Pro Lys Ala Leu Met Ala Ile Leu Glu His
            180                    185                    190
Ser His Arg Ile Arg Phe Lys Leu Lys Arg Pro Leu Glu Asp Gly Gly
            195                    200                    205
Arg Asp Ser Lys Ala Leu Val Glu Leu Asn Gly Val Ser Leu Ile Pro
            210                    215                    220
Lys Gly Ser Arg Asp Cys Gly Leu His Gly Gln Ala Pro Lys Val Pro
    225                    230                    235                    240
Pro Gln Asp Leu Pro Pro Thr Ala Thr Ser Ser Ser Met Ala Ser Phe
                    245                    250                    255
Leu Tyr Ser Thr Ala Leu Pro Asn His Ala Ile Arg Glu Leu Lys Gln
            260                    265                    270
Glu Ala Pro Ser Cys Pro Leu Ala Pro Ser Asp Leu Gly Leu Ser Arg
            275                    280                    285
Pro Met Pro Glu Pro Lys Ala Thr Gly Ala Gln Asp Phe Ser Asp Cys
            290                    295                    300
Cys Gly Gln Lys Pro Thr Gly Pro Gly Gly Pro Leu Ile Gln Asn Val
    305                    310                    315                    320
His Ala Ser Lys Arg Ile Leu Phe Ser Ile Val His Asp Lys Ser Glu
            325                    330                    335
Lys Trp Asp Ala Phe Ile Lys Glu Thr Glu Asp Ile Asn Thr Leu Arg
            340                    345                    350
Glu Cys Val Gln Ile Leu Phe Asn Ser Arg Tyr Ala Glu Ala Leu Gly
            355                    360                    365
Leu Gly Asn Met Val Pro Val Pro Tyr Arg Lys Ile Ala Cys Asp Pro
    370                    375                    380
Glu Ala Val Glu Ile Val Gly Ile Pro Asp Lys Ile Pro Phe Lys Arg
    385                    390                    395                    400
Pro Cys Thr Tyr Gly Val Pro Lys Leu Lys Arg Ile Leu Glu Glu Arg
                    405                    410                    415
His Ser Ile His Phe Ile Ile Lys Arg Met Phe Asp Glu Arg Ile Phe
            420                    425                    430
Thr Gly Asn Lys Phe Thr Lys Asp Thr Thr Lys Leu Glu Pro Ala Ser
            435                    440                    445
Pro Pro Glu Asp Thr Ser Ala Glu Val Ser Arg Ala Thr Val Leu Asp
    450                    455                    460
Leu Ala Gly Asn Ala Arg Ser Asp Lys Gly Ser Met Ser Glu Asp Cys
    465                    470                    475                    480
Gly Pro Gly Thr Ser Gly Glu Leu Gly Gly Leu Arg Pro Ile Lys Ile
                    485                    490                    495
Glu Pro Glu Asp Leu Asp Ile Ile Gln Val Thr Val Pro Asp Pro Ser
            500                    505                    510
Pro Thr Ser Glu Glu Met Thr Asp Ser Met Pro Gly His Leu Pro Ser
            515                    520                    525
Glu Asp Ser Gly Tyr Gly Met Glu Met Leu Thr Asp Lys Gly Leu Ser
            530                    535                    540
Glu Asp Ala Arg Pro Glu Glu Arg Pro Val Glu Asp Ser His Gly Asp
    545                    550                    555                    560
Val Ile Arg Pro Leu Arg Lys Gln Val Glu Leu Leu Phe Asn Thr Arg
                    565                    570                    575
Tyr Ala Lys Ala Ile Gly Ile Ser Glu Pro Val Lys Val Pro Tyr Ser
            580                    585                    590
Lys Phe Leu Met His Pro Glu Glu Leu Phe Val Val Gly Leu Pro Glu
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5414

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            595                      600                      605
Gly Ile Ser Leu Arg Arg Pro Asn Cys Phe Gly Ile Ala Lys Leu Arg
        610                      615                      620
Lys Ile Leu Glu Ala Ser Asn Ser Ile Gln Phe Val Ile Lys Arg Pro
625                      630                      635                      640
Glu Leu Leu Thr Glu Gly Val Lys Glu Pro Ile Val Asp Ser Gln Glu
                645                      650                      655
Arg Asp Ser Gly Asp Pro Leu Val Asp Glu Ser Leu Lys Arg Gln Gly
            660                      665                      670
Phe Gln Glu Asn Tyr Asp Ala Arg Leu Ser Arg Ile Asp Ile Ala Asn
        675                      680                      685
Thr Leu Arg Glu Gln Val Gln Asp Leu Phe Asn Lys Lys Tyr Gly Glu
            690                      695                      700
Ala Leu Gly Ile Lys Tyr Pro Val Gln Val Pro Tyr Lys Arg Ile Lys
705                      710                      715                      720
Ser Asn Pro Gly Ser Val Ile Ile Glu Gly Leu Pro Pro Gly Ile Pro
                725                      730                      735
Phe Arg Lys Pro Cys Thr Phe Gly Ser Gln Asn Leu Glu Arg Ile Leu
                740                      745                      750
Ala Val Ala Asp Lys Ile Lys Phe Thr Val Thr Arg Pro Phe Gln Gly
                755                      760                      765
Leu Ile Pro Lys Pro Asp Glu Asp Ala Asn Arg Leu Gly Glu Lys
        770                      775                      780
Val Ile Leu Arg Glu Gln Val Lys Glu Leu Phe Asn Glu Lys Tyr Gly
785                      790                      795                      800
Glu Ala Leu Gly Leu Asn Arg Pro Val Leu Val Pro Tyr Lys Leu Ile
                805                      810                      815
Arg Asp Ser Pro Asp Ala Val Glu Val Thr Gly Leu Pro Asp Asp Ile
            820                      825                      830
Pro Phe Arg Asn Pro Asn Thr Tyr Asp Ile His Arg Leu Glu Lys Ile
        835                      840                      845
Leu Lys Ala Arg Glu His Val Arg Met Val Ile Ile Asn Gln Leu Gln
        850                      855                      860
Pro Phe Ala Glu Ile Cys Asn Asp Ala Lys Val Pro Ala Lys Asp Ser
865                      870                      875                      880
Ser Ile Pro Lys Arg Lys Arg Lys Arg Val Ser Glu Gly Asn Ser Val
                885                      890                      895
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asn Pro Asp Ser
        900                      905                      910
Val Ala Ser Ala Asn Gln Ile Ser Leu Val Gln Trp Pro Met Tyr Met
        915                      920                      925
Val Asp Tyr Ala Gly Leu Asn Val Gln Leu Pro Gly Pro Leu Asn Tyr
        930                      935                      940
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<210> 6231
<211> 471
<212> DNA
<213> Homo sapiens

<400> 6231
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120

ttgcctttttt aaaaaaaaaa aaaaggctca aaaaaagagt atgctgggcc aaaaatctgg
180
cccctcaggc ctcctgacct ggaggagaaa aaggggcccg aagcccccg ttgcccccat
240
ctccatatgg aatggcacaa cccctcgagg ggaaccccc cctaaccata gttctaaaaa
300
ggggacaaaa aaatgggcgc tggattttttc aacgccggaa acccaattcc caccccctgg
360
ccggccgttc ttagggattc caacttggga cccaacctgg gcgtattctg ggccttactt
420
gtttcttgtg ggaattggta ttccgttccc atttccccca ccttccaacc c
471

<210> 6232
<211> 138
<212> PRT
<213> Homo sapiens

<400> 6232
Met Ser Thr Asn Asp Arg Pro Tyr Ser Gln Pro Leu His Ser Ser Leu
1   5   10   15
Gly Asp Arg Thr Arg Pro Cys Leu Phe Lys Lys Lys Lys Lys Ala Gln
            20   25   30
Lys Lys Ser Met Leu Gly Gln Lys Ser Gly Pro Ser Gly Leu Leu Thr
        35   40   45
Trp Arg Arg Lys Arg Gly Pro Lys Pro Pro Val Ala Pro Ile Ser Ile
    50   55   60
Trp Asn Gly Thr Thr Pro Arg Gly Glu Pro Pro Pro Asn His Ser Ser
65   70   75   80
Lys Lys Gly Thr Lys Lys Trp Ala Leu Asp Phe Ser Thr Pro Glu Thr
            85   90   95
Gln Phe Pro Pro Pro Gly Arg Pro Phe Leu Gly Ile Pro Thr Trp Asp
            100   105   110
Pro Thr Trp Ala Tyr Ser Gly Pro Tyr Leu Phe Leu Val Gly Ile Gly
            115   120   125
Ile Pro Phe Pro Phe Pro Pro Pro Ser Asn
    130   135

<210> 6233
<211> 894
<212> DNA
<213> Homo sapiens

<400> 6233
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120
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180
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240
gccatctgcc cccatcgacc ggtactggac accctggcca tgctgactgc ccaccgtgca
300

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480
aacagttgct gccgccggaa gtacagacca gaagcccctg gtccctctgt ctccctttcc
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780
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894
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<210> 6234
<211> 230
<212> PRT
<213> Homo sapiens

<400> 6234

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Met Ser Phe Lys Arg Glu Gly Asp Asp Trp Ser Gln Leu Asn Val Leu
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Lys Lys Arg Arg Val Gly Asp Leu Leu Ala Ser Tyr Ile Pro Glu Asp
            20                  25                  30
Glu Ala Leu Met Leu Arg Asp Gly Arg Phe Ala Cys Ala Ile Cys Pro
        35                  40                  45
His Arg Pro Val Leu Asp Thr Leu Ala Met Leu Thr Ala His Arg Ala
    50                  55                  60
Gly Lys Lys His Leu Ser Ser Leu Gln Leu Phe Tyr Gly Lys Lys Gln
65                  70                  75                  80
Pro Gly Lys Glu Arg Lys Gln Asn Pro Lys His Gln Asn Glu Leu Arg
                85                  90                  95
Arg Glu Glu Thr Lys Ala Glu Ala Pro Leu Leu Thr Gln Thr Arg Leu
            100                 105                 110
Ile Thr Gln Ser Ala Leu His Arg Ala Pro His Tyr Asn Ser Cys Cys
        115                 120                 125
Arg Arg Lys Tyr Arg Pro Glu Ala Pro Gly Pro Ser Val Ser Leu Ser
    130                 135                 140
Pro Met Pro Pro Ser Glu Val Lys Leu Gln Ser Gly Lys Ile Ser Arg
145                 150                 155                 160
Glu Pro Glu Pro Ala Ala Gly Pro Gln Ala Glu Glu Ser Ala Thr Val
                165                 170                 175
Ser Ala Pro Ala Pro Met Ser Pro Thr Arg Arg Arg Ala Leu Asp His
            180                 185                 190
Tyr Leu Thr Leu Arg Ser Ser Gly Trp Ile Pro Asp Gly Arg Gly Arg
        195                 200                 205
Trp Val Lys Asp Glu Asn Val Glu Phe Asp Ser Asp Glu Glu Glu Pro
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         210   215   220
      Pro Asp Leu Pro Leu Asp
      225   230

      <210> 6235
      <211> 3427
      <212> DNA
      <213> Homo sapiens

      <400> 6235
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      120
      tgggccctgc accgcggccg caagaaggcc acaggcagcc ccgtgtccat cttcgtctat
      180
      gatgtgaagc ctggcgcgga agagcagacc caggtggcca aagctgcctt caagcgcttc
      240
      aaaactctac ggcaccccaa catcctggct tacatcgatg gactggagac agaaaaatgc
      300
      ctccacgtcg tgacagaggc tgtgaccccg ttgggaatat acctcaaggc gagagtggag
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      gctggtggcc tgaaggagct ggagatctcc tgggggctac accagatcgt gaaagccctc
      420
      agcttcctgg tcaacgactg cagcctcatc cacaacaatg tctgcatggc cgccgtgttc
      480
      gtggaccgag ctggcgagtg gaagcttggg ggcctggact acatgtattc ggcccagggc
      540
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      660
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      720
      cctgggaaga tccccaaaac gctggtgccc cattactgtg agctggtggg agcaaacccc
      780
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      1320

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2940

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3427
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<210> 6236
<211> 820
<212> PRT
<213> Homo sapiens
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<400> 6236
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            20                  25                  30
Pro Glu Gly Gly Leu Pro Gly Pro Trp Ala Leu His Arg Gly Arg Lys
        35                  40                  45
Lys Ala Thr Gly Ser Pro Val Ser Ile Phe Val Tyr Asp Val Lys Pro
    50                  55                  60
Gly Ala Glu Glu Gln Thr Gln Val Ala Lys Ala Ala Phe Lys Arg Phe
65                  70                  75                  80
Lys Thr Leu Arg His Pro Asn Ile Leu Ala Tyr Ile Asp Gly Leu Glu
                85                  90                  95
Thr Glu Lys Cys Leu His Val Val Thr Glu Ala Val Thr Pro Leu Gly
            100                 105                 110
Ile Tyr Leu Lys Ala Arg Val Glu Ala Gly Gly Leu Lys Glu Leu Glu
        115                 120                 125
Ile Ser Trp Gly Leu His Gln Ile Val Lys Ala Leu Ser Phe Leu Val
    130                 135                 140
Asn Asp Cys Ser Leu Ile His Asn Asn Val Cys Met Ala Ala Val Phe
145                 150                 155                 160
Val Asp Arg Ala Gly Glu Trp Lys Leu Gly Gly Leu Asp Tyr Met Tyr
                165                 170                 175
Ser Ala Gln Gly Asn Gly Gly Gly Pro Pro Arg Lys Gly Ile Pro Glu
            180                 185                 190
Leu Glu Gln Tyr Asp Pro Pro Glu Leu Ala Asp Ser Ser Gly Arg Val
        195                 200                 205
Val Arg Glu Lys Trp Ser Ala Asp Met Trp Arg Leu Gly Cys Leu Ile
    210                 215                 220
Trp Glu Val Phe Asn Gly Pro Leu Pro Arg Ala Ala Ala Leu Arg Asn
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225                    230              235                 240
Pro Gly Lys Ile Pro Lys Thr Leu Val Pro His Tyr Cys Glu Leu Val
                245                  250                 255
Gly Ala Asn Pro Lys Val Arg Pro Asn Pro Ala Arg Phe Leu Gln Asn
            260                  265                 270
Cys Arg Ala Pro Gly Gly Phe Met Ser Asn Arg Phe Val Glu Thr Asn
            275                  280                 285
Leu Phe Leu Glu Glu Ile Gln Ile Lys Glu Pro Ala Glu Lys Gln Lys
        290                  295                 300
Phe Phe Gln Glu Leu Ser Lys Ser Leu Asp Ala Phe Pro Glu Asp Phe
305                      310                  315                 320
Cys Arg His Lys Val Leu Pro Gln Leu Leu Thr Ala Phe Glu Phe Gly
                325                  330                 335
Asn Ala Gly Ala Val Val Leu Thr Pro Leu Phe Lys Val Gly Lys Phe
            340                  345                 350
Leu Ser Ala Glu Glu Tyr Gln Gln Lys Ile Ile Pro Val Val Val Lys
            355                  360                 365
Met Phe Ser Ser Thr Asp Arg Ala Met Arg Ile Arg Leu Leu Gln Gln
        370                  375                 380
Met Glu Gln Phe Ile Gln Tyr Leu Asp Glu Pro Thr Val Asn Thr Gln
385                      390                  395                 400
Ile Phe Pro His Val Val His Gly Phe Leu Asp Thr Asn Pro Ala Ile
                405                  410                 415
Arg Glu Gln Thr Val Lys Ser Met Leu Leu Leu Ala Pro Lys Leu Asn
            420                  425                 430
Glu Ala Asn Leu Asn Val Glu Leu Met Lys His Phe Ala Arg Leu Gln
            435                  440                 445
Ala Lys Asp Glu Gln Gly Pro Ile Arg Cys Asn Thr Thr Val Cys Leu
        450                  455                 460
Gly Lys Ile Gly Ser Tyr Leu Ser Ala Ser Thr Arg His Arg Val Leu
465                      470                  475                 480
Thr Ser Ala Phe Ser Arg Ala Thr Arg Asp Pro Phe Ala Pro Ser Arg
                485                  490                 495
Val Ala Gly Val Leu Gly Phe Ala Ala Thr His Asn Leu Tyr Ser Met
            500                  505                 510
Asn Asp Cys Ala Gln Lys Ile Leu Pro Val Leu Cys Gly Leu Thr Val
            515                  520                 525
Asp Pro Glu Lys Ser Val Arg Asp Gln Ala Phe Lys Ala Ile Arg Ser
        530                  535                 540
Phe Leu Ser Lys Leu Glu Ser Val Ser Glu Asp Pro Thr Gln Leu Glu
545                      550                  555                 560
Glu Val Glu Lys Asp Val His Ala Ala Ser Ser Pro Gly Met Gly Gly
                565                  570                 575
Ala Ala Ala Ser Trp Ala Gly Trp Ala Val Thr Gly Val Ser Ser Leu
            580                  585                 590
Thr Ser Lys Leu Ile Arg Ser His Pro Thr Thr Ala Pro Thr Glu Thr
            595                  600                 605
Asn Ile Pro Gln Arg Pro Thr Pro Glu Gly Val Pro Ala Pro Ala Pro
        610                  615                 620
Thr Pro Val Pro Ala Thr Pro Thr Thr Ser Gly His Trp Glu Thr Gln
625                      630                  635                 640
Glu Glu Asp Lys Asp Thr Ala Glu Asp Ser Ser Thr Ala Asp Arg Trp
                645                  650                 655
Asp Asp Glu Asp Trp Gly Ser Leu Glu Gln Glu Ala Glu Ser Val Leu
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```
              660                    665                     670
Ala Gln Gln Asp Asp Trp Ser Thr Gly Gly Gln Val Ser Arg Ala Ser
          675                    680                     685
Gln Val Ser Asn Ser Asp His Lys Ser Ser Lys Ser Pro Glu Ser Asp
          690                    695                     700
Trp Ser Ser Trp Glu Ala Glu Gly Ser Trp Glu Gln Gly Trp Gln Glu
705                    710                     715                    720
Pro Ser Ser Gln Glu Pro Pro Asp Gly Thr Arg Leu Ala Ser Glu
                  725                    730                     735
Tyr Asn Trp Gly Gly Pro Glu Ser Ser Asp Lys Gly Asp Pro Phe Ala
              740                    745                     750
Thr Leu Ser Ala Arg Pro Ser Thr Gln Pro Arg Pro Asp Ser Trp Gly
          755                    760                     765
Glu Asp Asn Trp Glu Gly Leu Glu Thr Asp Ser Arg Gln Val Lys Ala
          770                    775                     780
Glu Leu Ala Arg Lys Lys Arg Glu Glu Arg Arg Arg Glu Met Glu Ala
785                    790                     795                    800
Lys Arg Ala Glu Arg Lys Val Ala Lys Gly Pro Met Lys Leu Gly Ala
                  805                    810                     815
Arg Lys Leu Asp
              820


<210> 6237
<211> 494
<212> DNA
<213> Homo sapiens

<400> 6237
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494


<210> 6238
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6238
Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala Leu
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5422

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Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile Pro Val
                20                    25                    30
Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys Arg Ile Met
                35                    40                    45
Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro Val Tyr Glu Ala
     50                    55                    60
Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu Arg Ser Met Glu Gly
65                    70                    75                    80
His Ala Pro His His Phe Lys Leu Val Ser Val His Val Phe Ile Arg
                85                    90                    95
His Gly Asp Arg Tyr Pro Leu Tyr Val Ile Pro Lys Thr Lys Arg Pro
                100                   105                   110
Glu Ile Asp Cys Thr Leu Val Ala Asn Arg Lys Pro Tyr His Pro Lys
        115                   120                   125
Leu Glu Ala Phe Ile Ser His Met Leu Arg Gly Ser Gly
        130                   135                   140
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<210> 6239
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6239
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900
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5423

aaaaaaaaaa a
911

<210> 6240
<211> 235
<212> PRT
<213> Homo sapiens

<400> 6240

Met	Ala	Trp	Gln	Gly	Leu	Ala	Ala	Glu	Phe	Leu	Gln	Val	Pro	Ala	Val
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Thr	Arg	Ala	Tyr	Thr	Ala	Ala	Cys	Val	Leu	Thr	Thr	Ala	Ala	Val	Gln
		20					25					30			

Leu	Glu	Leu	Leu	Ser	Pro	Phe	Gln	Leu	Tyr	Phe	Asn	Pro	His	Leu	Val
	35					40					45				

Phe	Arg	Lys	Phe	Gln	Val	Trp	Arg	Leu	Val	Thr	Asn	Phe	Leu	Phe	Phe
	50				55					60					

Gly	Pro	Leu	Gly	Phe	Ser	Phe	Phe	Phe	Asn	Met	Leu	Phe	Val	Phe	Arg
65				70					75				80		

Tyr	Cys	Arg	Met	Leu	Glu	Glu	Gly	Ser	Phe	Arg	Gly	Arg	Thr	Ala	Asp
			85					90				95			

Phe	Val	Phe	Met	Phe	Leu	Phe	Gly	Gly	Val	Leu	Met	Thr	Leu	Leu	Gly
		100					105					110			

Leu	Leu	Gly	Ser	Leu	Phe	Phe	Leu	Gly	Gln	Ala	Leu	Met	Ala	Met	Leu
	115					120					125				

Val	Tyr	Val	Trp	Ser	Arg	Arg	Ser	Pro	Arg	Val	Arg	Val	Asn	Phe	Phe
	130				135					140					

Gly	Leu	Leu	Thr	Phe	Gln	Ala	Pro	Phe	Leu	Pro	Trp	Ala	Leu	Met	Gly
145				150					155					160	

Phe	Ser	Leu	Leu	Leu	Gly	Asn	Ser	Ile	Leu	Val	Asp	Leu	Leu	Gly	Ile
			165					170					175		

Ala	Val	Gly	His	Ile	Tyr	Tyr	Phe	Leu	Glu	Asp	Val	Phe	Pro	Asn	Gln
			180					185					190		

Pro	Gly	Gly	Lys	Arg	Leu	Leu	Gln	Thr	Pro	Gly	Phe	Leu	Lys	Leu	Leu
	195					200					205				

Leu	Asp	Ala	Pro	Ala	Glu	Asp	Pro	Asn	Tyr	Leu	Pro	Leu	Pro	Glu	Glu
	210				215					220					

Gln	Pro	Gly	Pro	His	Leu	Pro	Pro	Pro	Gln	Gln
225				230					235	

<210> 6241
<211> 1515
<212> DNA
<213> Homo sapiens

<400> 6241

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240
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cagtgacctg tacttggatg cttcaatcag agctgtcctg ttaaatagag caagtttttc
1500
ctagacccac attct
1515

<210> 6242
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6242
Cys Gly Arg Cys Leu Gly Pro Ser Ala Thr Arg Thr Arg Arg Ser Ala
1   5   10   15
Ser Gln Ala Gly Ser Lys Ser Gln Ala Val Glu Lys Pro Pro Ser Glu

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                    20                      25                      30
        Lys Pro Arg Leu Arg Arg Ser Ser Arg Arg Ala Pro Gly Gly Gly Pro
                35                      40                      45
        Gly Glu Pro Pro Pro Pro Glu Leu Ala Leu Leu Pro Pro Pro Pro Pro
                50                      55                      60
        Pro Pro Pro Thr Pro Ala Thr Pro Thr Ser Ser Ala Ser Asn Leu Asp
        65                      70                      75                      80
        Leu Gly Glu Gln Arg Asp Ala Trp Glu Thr Phe Gln Lys Arg Gln Lys
                        85                      90                      95
        Leu Thr Ser Glu Gly Ala Ala Lys Leu Leu Leu Asp Thr Phe Glu Tyr
                    100                     105                     110
        Gln Gly Leu Val Lys His Thr Gly Gly Cys His Cys Gly Ala Val Arg
                    115                     120                     125
        Phe Glu Val Trp Ala Ser Ala Asp Leu His Ile Phe Asp Cys Asn Cys
                130                     135                     140
        Ser Ile Cys Lys Lys Lys Gln Asn Arg His Phe Ile Val Pro Ala Ser
        145                     150                     155                     160
        Arg Phe Lys Leu Leu Lys Gly Ala Glu His Ile Thr Thr Tyr Thr Phe
                        165                     170                     175
        Asn Thr His Lys Ala Gln His Thr Phe Cys Lys Arg Cys Gly Val Gln
                    180                     185                     190
        Ser Phe Tyr Thr Pro Arg Ser Asn Pro Gly Gly Phe Gly Ile Ala Pro
                    195                     200                     205
        His Cys Leu Asp Glu Gly Thr Val Arg Ser Met Val Thr Glu Glu Phe
                210                     215                     220
        Asn Gly Ser Asp Trp Glu Lys Ala Met Lys Glu His Lys Thr Ile Lys
        225                     230                     235                     240
        Asn Met Ser Lys Glu
                        245
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<210> 6243
<211> 326
<212> DNA
<213> Homo sapiens

<400> 6243
gcgcgccagg gagagaagga gaggaactga tggaacaaag tcaaagagga agtgggataa
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gataggacat aaggacacgt ggagcattca gatccagaga ggatgatcag caccctcttcc
120
tctgagacca gagggacaaa ccataatgag tgaagagatg aggacattct taaagtggag
180
ctagcaaagc tgggaatggc cttccacaag aggaaaccta agactggacc cagaatagta
240
aaggtgggtt tggggacttg aggcaagtga gaaagctctg gaaatgccgc tggataaatt
300
ctgtagggat gcattcctgg agagtg
326
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<210> 6244
<211> 104
<212> PRT
<213> Homo sapiens
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```
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Met His Pro Tyr Arg Ile Tyr Pro Ala Ala Phe Pro Glu Leu Ser His
1               5               10              15
Leu Pro Gln Val Pro Lys Pro Thr Phe Thr Ile Leu Gly Pro Val Leu
        20              25              30
Gly Phe Leu Leu Trp Lys Ala Ile Pro Ser Phe Ala Ser Ser Thr Leu
        35              40              45
Arg Met Ser Ser Ser Leu His Ser Leu Trp Phe Val Pro Leu Val Ser
        50              55              60
Glu Glu Glu Val Leu Ile Ile Leu Ser Gly Ser Glu Cys Ser Thr Cys
65              70              75              80
Pro Tyr Val Leu Ser Tyr Pro Thr Ser Ser Leu Thr Leu Phe His Gln
                85              90              95
Phe Leu Ser Phe Ser Pro Trp Arg
            100
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<210> 6245
<211> 6609
<212> DNA
<213> Homo sapiens
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<400> 6245
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aagttcttgg ttcaagtcaa cctgttactt gccattggat ggtaatattt gacttttcaa
120
tcttatcctg attgataagc ggactcccag ttttttgcctt ctctttgccc cagaatttgg
180
agacctcggg cctctccct gcttttctcc tctttcctag attttctcaa gtgtccccgt
240
ttagtcttcc ctcctcagct tggctcctga gaacatttgc tgctgctttt gttttttgtag
300
gtgttggaca atcagataaa gaaagacctg gctgacaagg agacactgga gaacatgatg
360
cagagacacg aggaggaggc ccatgagaag ggcaaaattc tcagcgaaca gaaggcgatg
420
atcaatgcta tggattccaa gatcagatcc ctggaacaga ggattgtgga actgtctgaa
480
gccaataaac ttgcagcaaa tagcagtctt tttacccaaa ggaacatgaa ggcccaagaa
540
gagatgattt ctgaactcag gcaacagaaa ttttacctgg agacacaggc tgggaagttg
600
gaggcccaga accgaaaact ggaggagcag ctggagaaga tcagccacca agaccacagt
660
gacaagaatc ggctgctgga actggagaca agattgcggg aggtcagtct agagcacgag
720
gagcagaaac tggagctcaa gcgccagctc acagagctac agctctccct gcaggagcgc
780
gagtcacagt tgacagccct gcaggctgca cgggcggccc tggagagcca gcttcgccag
840
gcgaagacag agctggaaga gaccacagca gaagctgaag aggagatcca ggcactcacg
900
gcacatagag atgaaatcca gcgcaaattt gatgctcttc gtaacagctg tactgtaatc
960
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                                    5427

acagacctgg aggagcagct aaaccagctg accgaggaca acgctgaact caacaaccaa
1020

aacttctact tgtccaaaca actcgatgag gcttctggcg ccaacgacga gattgtacaa
1080

ctgcgaagtg aagtggacca tctccgccgg gagatcacgg aacgagagat gcagcttacc
1140

agccagaagc aaacgatgga ggctctgaag accacgtgca ccatgctgga ggaacaggtc
1200

atggatttgg aggccctaaa cgatgagctg ctagaaaaag agcggcagtg ggaggcctgg
1260

aggagcgtcc tgggtgatga gaaatcccag tttgagtgtc gggttcgaga gctgcagaga
1320

atgctggaca ccgagaaaca gagcagggcg agagccgatc agcggatcac cgagtctcgc
1380

caggtggtgg agctggcagt gaaggagcac aaggctgaga ttctcgctct gcagcaggct
1440

ctcaaagagc agaagctgaa ggccgagagc ctctctgaca agctcaatga cctggagaag
1500

aagcatgcta tgcttgaaat gaatgcccga agcttacagc agaagctgga gactgaacga
1560

gagctcaaac agaggcttct ggaagagcaa gccaaattac agcagcagat ggacctgcag
1620

aaaaatcaca ttttccgtct gactcaagga ctgcaagaag ctctagatcg ggctgatcta
1680

ctgaagacag aaagaagtga cttggagtat cagctggaaa acattcaggt tctctattct
1740

catgaaaagg tgaaaatgga aggcactatt tctcaacaaa ccaaactcat tgattttctg
1800

caagccaaaa tggaccaacc tgctaaaaag aaaaaggttc ctctgcagta caatgagctg
1860

aagctggccc tggagaagga gaaagctcgc tgtgcagagc tagaggaagc ccttcagaag
1920

acccgcatcg agctccggtc cgcccgggag gaagctgccc accgcaaagc aacggaccac
1980

ccacacccat ccacgccagc caccgcgagg cagcagatcg ccatgtctgc catcgtgcgg
2040

tcgccagagc accagcccag tgccatgagc ctgctggccc cgccatccag ccgcagaaag
2100

gagtcttcaa ctccagagga atttagtcgg cgtcttaagg aacgcatgca ccacaatatt
2160

cctcaccgat tcaacgtagg actgaacatg cgagccacaa agtgtgctgt gtgtctggat
2220

accgtgcact ttggacgcca ggcatccaaa tgtctcgaat gtcaggtgat gtgtcacccc
2280

aagtgctcca cgtgcttgcc agccacctgc ggcttgcctg ctgaatatgc cacacacttc
2340

accgaggcct tctgccgtga caaaatgaac tccccaggtc tccagaccaa ggagcccagc
2400

agcagcttgc acctggaagg gtggatgaag gtgcccagga ataacaaacg aggacagcaa
2460

ggctgggaca ggaagtacat tgtcctggag ggatcaaaag tcctcattta tgacaatgaa
2520

gccagagaag ctggacagag gccggtggaa gaatttgagc tgtgccttcc cgacggggat
2580

5428

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gtatctattc atggtgccgt tggtgcttcc gaactcgcaa atacagccaa agcagatgtc
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2700
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2760
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2880
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3000
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4140
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4200
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5429

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4320
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gctcaaaggt agacccgttt ccaccgcagc aggtgaacat gaccgtgttt tcaactgtgt
5820
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5430

ccacagttca gatcccttte cagattgcaa cctggcctgc atcccagctc cttcctgctc
5880

gtgtcttaac ctaagtgctt tcttgtttga aacgcctaca aacctccatg tggtagctcc
5940

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6000

cctcccctcc cgtccccagg gcagatttga ttgaatgttt gctgaagttt tgtctcttgg
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6120

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6180

aactgctttc tgctatatag aactagctca aaagactgta catatttaca agaaacttta
6240

tattcgtaaa aaaaaaaga ggaaattgaa ttggtttcta cttttttatt gtaaaaggtg
6300

cattttttcaa cacttacttt tggtttcaat ggtggtagtt gtggacagcc atcttcactg
6360

gagggtgggg agctccgtgt gaccaccaag atgccagcag gatataccgt aacacgaaat
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tgctgtcaaa agcttattag catcaatcaa gattctaggt ctccaaaagt acaggctttt
6480

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ccttgagagg aatgaacttt gttgttgaac aattagtgaa ataaagcaat gatctaaact
6600

aaaaaaaaaa
6609

<210> 6246
<211> 1286
<212> PRT
<213> Homo sapiens

<400> 6246
Val Leu Asp Asn Gln Ile Lys Lys Asp Leu Ala Asp Lys Glu Thr Leu
1   5   10   15
Glu Asn Met Met Gln Arg His Glu Glu Glu Ala His Glu Lys Gly Lys
            20   25   30
Ile Leu Ser Glu Gln Lys Ala Met Ile Asn Ala Met Asp Ser Lys Ile
        35   40   45
Arg Ser Leu Glu Gln Arg Ile Val Glu Leu Ser Glu Ala Asn Lys Leu
    50   55   60
Ala Ala Asn Ser Ser Leu Phe Thr Gln Arg Asn Met Lys Ala Gln Glu
65   70   75   80
Glu Met Ile Ser Glu Leu Arg Gln Gln Lys Phe Tyr Leu Glu Thr Gln
            85   90   95
Ala Gly Lys Leu Glu Ala Gln Asn Arg Lys Leu Glu Glu Gln Leu Glu
            100   105   110
Lys Ile Ser His Gln Asp His Ser Asp Lys Asn Arg Leu Leu Glu Leu
        115   120   125
Glu Thr Arg Leu Arg Glu Val Ser Leu Glu His Glu Glu Gln Lys Leu
    130   135   140
Glu Leu Lys Arg Gln Leu Thr Glu Leu Gln Leu Ser Leu Gln Glu Arg

```
        145                     150                     155                     160
Glu Ser Gln Leu Thr Ala Leu Gln Ala Ala Arg Ala Ala Leu Glu Ser
                        165                     170                     175
Gln Leu Arg Gln Ala Lys Thr Glu Leu Glu Glu Thr Thr Ala Glu Ala
                        180                     185                     190
Glu Glu Glu Ile Gln Ala Leu Thr Ala His Arg Asp Glu Ile Gln Arg
                        195                     200                     205
Lys Phe Asp Ala Leu Arg Asn Ser Cys Thr Val Ile Thr Asp Leu Glu
        210                     215                     220
Glu Gln Leu Asn Gln Leu Thr Glu Asp Asn Ala Glu Leu Asn Asn Gln
225                     230                     235                     240
Asn Phe Tyr Leu Ser Lys Gln Leu Asp Glu Ala Ser Gly Ala Asn Asp
                        245                     250                     255
Glu Ile Val Gln Leu Arg Ser Glu Val Asp His Leu Arg Arg Glu Ile
                        260                     265                     270
Thr Glu Arg Glu Met Gln Leu Thr Ser Gln Lys Gln Thr Met Glu Ala
                        275                     280                     285
Leu Lys Thr Thr Cys Thr Met Leu Glu Glu Gln Val Met Asp Leu Glu
                        290                     295                     300
Ala Leu Asn Asp Glu Leu Leu Glu Lys Glu Arg Gln Trp Glu Ala Trp
305                     310                     315                     320
Arg Ser Val Leu Gly Asp Glu Lys Ser Gln Phe Glu Cys Arg Val Arg
                        325                     330                     335
Glu Leu Gln Arg Met Leu Asp Thr Glu Lys Gln Ser Arg Ala Arg Ala
                        340                     345                     350
Asp Gln Arg Ile Thr Glu Ser Arg Gln Val Val Glu Leu Ala Val Lys
                        355                     360                     365
Glu His Lys Ala Glu Ile Leu Ala Leu Gln Gln Ala Leu Lys Glu Gln
        370                     375                     380
Lys Leu Lys Ala Glu Ser Leu Ser Asp Lys Leu Asn Asp Leu Glu Lys
385                     390                     395                     400
Lys His Ala Met Leu Glu Met Asn Ala Arg Ser Leu Gln Gln Lys Leu
                        405                     410                     415
Glu Thr Glu Arg Glu Leu Lys Gln Arg Leu Leu Glu Glu Gln Ala Lys
                        420                     425                     430
Leu Gln Gln Gln Met Asp Leu Gln Lys Asn His Ile Phe Arg Leu Thr
                        435                     440                     445
Gln Gly Leu Gln Glu Ala Leu Asp Arg Ala Asp Leu Leu Lys Thr Glu
        450                     455                     460
Arg Ser Asp Leu Glu Tyr Gln Leu Glu Asn Ile Gln Val Leu Tyr Ser
465                     470                     475                     480
His Glu Lys Val Lys Met Glu Gly Thr Ile Ser Gln Gln Thr Lys Leu
                        485                     490                     495
Ile Asp Phe Leu Gln Ala Lys Met Asp Gln Pro Ala Lys Lys Lys Lys
                        500                     505                     510
Val Pro Leu Gln Tyr Asn Glu Leu Lys Leu Ala Leu Glu Lys Glu Lys
                        515                     520                     525
Ala Arg Cys Ala Glu Leu Glu Glu Ala Leu Gln Lys Thr Arg Ile Glu
        530                     535                     540
Leu Arg Ser Ala Arg Glu Glu Ala Ala His Arg Lys Ala Thr Asp His
545                     550                     555                     560
Pro His Pro Ser Thr Pro Ala Thr Ala Arg Gln Gln Ile Ala Met Ser
                        565                     570                     575
Ala Ile Val Arg Ser Pro Glu His Gln Pro Ser Ala Met Ser Leu Leu
```

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                580                585                590
Ala Pro Pro Ser Ser Arg Arg Lys Glu Ser Ser Thr Pro Glu Glu Phe
        595                600                605
Ser Arg Arg Leu Lys Glu Arg Met His His Asn Ile Pro His Arg Phe
610                630                620
Asn Val Gly Leu Asn Met Arg Ala Thr Lys Cys Ala Val Cys Leu Asp
625                630                635                640
Thr Val His Phe Gly Arg Gln Ala Ser Lys Cys Leu Glu Cys Gln Val
            645                650                655
Met Cys His Pro Lys Cys Ser Thr Cys Leu Pro Ala Thr Cys Gly Leu
            660                665                670
Pro Ala Glu Tyr Ala Thr His Phe Thr Glu Ala Phe Cys Arg Asp Lys
            675                680                685
Met Asn Ser Pro Gly Leu Gln Thr Lys Glu Pro Ser Ser Ser Leu His
            690                695                700
Leu Glu Gly Trp Met Lys Val Pro Arg Asn Asn Lys Arg Gly Gln Gln
705                710                715                720
Gly Trp Asp Arg Lys Tyr Ile Val Leu Glu Gly Ser Lys Val Leu Ile
                725                730                735
Tyr Asp Asn Glu Ala Arg Glu Ala Gly Gln Arg Pro Val Glu Glu Phe
                740                745                750
Glu Leu Cys Leu Pro Asp Gly Asp Val Ser Ile His Gly Ala Val Gly
                755                760                765
Ala Ser Glu Leu Ala Asn Thr Ala Lys Ala Asp Val Pro Tyr Ile Leu
            770                775                780
Lys Met Glu Ser His Pro His Thr Thr Cys Trp Pro Gly Arg Thr Leu
785                790                795                800
Tyr Leu Leu Ala Pro Ser Phe Pro Asp Lys Gln Arg Trp Val Thr Ala
                805                810                815
Leu Glu Ser Val Val Ala Gly Gly Arg Val Ser Arg Glu Lys Ala Glu
                820                825                830
Ala Asp Ala Lys Leu Leu Gly Asn Ser Leu Leu Lys Leu Glu Gly Asp
            835                840                845
Asp Arg Leu Asp Met Asn Cys Thr Leu Pro Phe Ser Asp Gln Val Val
850                855                860
Leu Val Gly Thr Glu Glu Gly Leu Tyr Ala Leu Asn Val Leu Lys Asn
865                870                875                880
Ser Leu Thr His Val Pro Gly Ile Gly Ala Val Phe Gln Ile Tyr Ile
                885                890                895
Ile Lys Asp Leu Glu Lys Leu Leu Met Ile Ala Gly Glu Glu Arg Ala
            900                905                910
Leu Cys Leu Val Asp Val Lys Lys Val Lys Gln Ser Leu Ala Gln Ser
            915                920                925
His Leu Pro Ala Gln Pro Asp Ile Ser Pro Asn Ile Phe Glu Ala Val
            930                935                940
Lys Gly Cys His Leu Phe Gly Ala Gly Lys Ile Glu Asn Gly Leu Cys
945                950                955                960
Ile Cys Ala Ala Met Pro Ser Lys Val Val Ile Leu Arg Tyr Asn Glu
                965                970                975
Asn Leu Ser Lys Tyr Cys Ile Arg Lys Glu Ile Glu Thr Ser Glu Pro
            980                985                990
Cys Ser Cys Ile His Phe Thr Asn Tyr Ser Ile Leu Ile Gly Thr Asn
            995                1000                1005
Lys Phe Tyr Glu Ile Asp Met Lys Gln Tyr Thr Leu Glu Glu Phe Leu
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         1010                    1015                    1020
Asp Lys Asn Asp His Ser Leu Ala Pro Ala Val Phe Ala Ala Ser Ser
1025                    1030                    1035                    1040
Asn Ser Phe Pro Val Ser Ile Val Gln Val Asn Ser Ala Gly Gln Arg
                1045                    1050                    1055
Glu Glu Tyr Leu Leu Cys Phe His Glu Phe Gly Val Phe Val Asp Ser
                1060                    1065                    1070
Tyr Gly Arg Arg Ser Arg Thr Asp Asp Leu Lys Trp Ser Arg Leu Pro
        1075                    1080                    1085
Leu Ala Phe Ala Tyr Arg Glu Pro Tyr Leu Phe Val Thr His Phe Asn
        1090                    1095                    1100
Ser Leu Glu Val Ile Glu Ile Gln Ala Arg Ser Ser Ala Gly Thr Pro
1105                    1110                    1115                    1120
Ala Arg Ala Tyr Leu Asp Ile Pro Asn Pro Arg Tyr Leu Gly Pro Ala
                1125                    1130                    1135
Ile Ser Ser Gly Ala Ile Tyr Leu Ala Ser Ser Tyr Gln Asp Lys Leu
                1140                    1145                    1150
Arg Val Ile Cys Cys Lys Gly Asn Leu Val Lys Glu Ser Gly Thr Glu
        1155                    1160                    1165
His His Arg Gly Pro Ser Thr Ser Arg Ser Ser Pro Asn Lys Arg Gly
        1170                    1175                    1180
Pro Pro Thr Tyr Asn Glu His Ile Thr Lys Arg Val Ala Ser Ser Pro
1185                    1190                    1195                    1200
Ala Pro Pro Glu Gly Pro Ser His Pro Arg Glu Pro Ser Thr Pro His
                1205                    1210                    1215
Arg Tyr Arg Glu Gly Arg Thr Glu Leu Arg Arg Asp Lys Ser Pro Gly
                1220                    1225                    1230
Arg Pro Leu Glu Arg Glu Lys Ser Pro Gly Arg Met Leu Ser Thr Arg
        1235                    1240                    1245
Arg Glu Arg Ser Pro Gly Arg Leu Phe Glu Asp Ser Ser Arg Gly Arg
        1250                    1255                    1260
Leu Pro Ala Gly Ala Val Arg Thr Pro Leu Ser Gln Val Asn Lys Val
1265                    1270                    1275                    1280
Trp Asp Gln Ser Ser Val
                1285
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<210> 6247
<211> 497
<212> DNA
<213> Homo sapiens
```

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<400> 6247
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120
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180
gcccgcagcg cgttctcccg ggagagaaat attattcatc tgtgccagag gaaggagggg
240
caacccatgt ctatcgttat cacagaggcg agtcgaagct gcacatgtgc ttggacatag
300
ggaatggtca gagaaaagac agaaaaaaga catcccttgg tcctggaggc agctatcaaa
360
```

tatcagagca tgctccagag gcatcccagc ctgtgagtac ggaactgctt acgcactggg
420
tttcaccacc gttgcaactc catgaaccag ttgacatggt tcttagaggg ctatttgaat
480
tgagtctata gtatttt
497

<210> 6248
<211> 142
<212> PRT
<213> Homo sapiens

<400> 6248
Met Gly Trp Thr Asp Val Pro Cys Ser Val His Lys Ala Gly Ser Arg
1   5   10   15
Ser Ala Gly Glu Gly Gln Glu Glu Gly Gly Gly Leu Ala Cys Pro Gly
            20   25   30
Ala Ser Gln Arg Leu His Gly Gly Pro Cys Pro Gly Gly Ala Pro Pro
            35   40   45
Arg Glu Thr Ala Gly Ser Arg Pro Ala Ala Arg Ser Pro Gly Arg Glu
        50   55   60
Ile Leu Phe Ile Cys Ala Arg Gly Arg Arg Gly Asn Pro Cys Leu Ser
65   70   75   80
Leu Ser Gln Arg Arg Val Glu Ala Ala His Val Leu Gly His Arg Glu
                85   90   95
Trp Ser Glu Lys Arg Gln Lys Lys Asp Ile Pro Trp Ser Trp Arg Gln
            100   105   110
Leu Ser Asn Ile Arg Ala Cys Ser Arg Gly Ile Pro Ala Cys Glu Tyr
            115   120   125
Gly Thr Ala Tyr Ala Leu Gly Phe Thr Thr Val Ala Thr Pro
        130   135   140

<210> 6249
<211> 1217
<212> DNA
<213> Homo sapiens

<400> 6249
nntgagcaac aaaccgagtt ctggagaacg ccatcagctc gctgcttaaa ctggaaacaa
60
aagtctcaac ttccaacctc tttgcagcta ggagtggcca agtagcatag atctggtgaa
120
tgaactgcag gtgggaattt ctgagaaggt ttccttctta aatagaaaga ttaaaccaca
180
ggttccatta tgggtcgact tgatgggaaa gtcatcatcc tgacggccgc tgctcagggg
240
attggccaag cagctgcctt agcttttgca agagaaggtg ccaaagtcat agccacagac
300
attaatgagt ccaaacttca ggaactggaa aagtacccgg gtattcaaac tcgtgtcctt
360
gatgtcacaa agaagaaaca aattgatcag tttgccaatg aagttgagag acttgatgtt
420
ctctttaatg ttgctggttt tgtccatcat ggaactgtcc tggattgtga ggagaaagac
480

5435

```
tgggacttct cgatgaatct caatgtgcgc agcatgtacc tgatgatcaa ggcattcctt
540
cctaaaatgc ttgctcagaa atctggcaat attatcaaca tgtcttctgt ggcttccagc
600
gtcaaaggag ttgtgaacag atgtgtgtac agcacaacca aggcagccgt gattggcctc
660
acaaaatctg tggctgcaga tttcatccag cagggcatca ggtgcaactg tgtgtgccca
720
ggaacagttg atacgccatc tctacaagaa agaatacaag ccagaggaaa tcctgaagag
780
gcacggaatg atttcctgaa gagacaaaag acgggaagat tcgcaactgc agaagaaata
840
gccatgctct gcgtgtattt ggcttctgat gaatctgctt atgtaactgg taaccctgtc
900
atcattgatg gaggctggag cttgtgattt taggatctcc atggtgggaa ggaaggcagg
960
cccttcctat ccacagtgaa cctggttacg aagaaaactc accaatcatc tccttcctgt
1020
taatcacatg ttaatgaaaa taagctcttt ttaatgatgt cactgtttgc aagagtctga
1080
ttctttaagt atattaatct ctttgtaatc tcttctgaaa tcattgtaaa gaaataaaaa
1140
tattgaactc atagcaggag aatagttttt aaaataaatc tcgatttgtt agcaaaaaaa
1200
aaaaaaaaaa aaaaaaa
1217


<210> 6250
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6250
Met Gly Arg Leu Asp Gly Lys Val Ile Ile Leu Thr Ala Ala Ala Gln
1               5                   10                  15
Gly Ile Gly Gln Ala Ala Ala Leu Ala Phe Ala Arg Glu Gly Ala Lys
            20                  25                  30
Val Ile Ala Thr Asp Ile Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys
        35                  40                  45
Tyr Pro Gly Ile Gln Thr Arg Val Leu Asp Val Thr Lys Lys Lys Gln
    50                  55                  60
Ile Asp Gln Phe Ala Asn Glu Val Glu Arg Leu Asp Val Leu Phe Asn
65                  70                  75                  80
Val Ala Gly Phe Val His His Gly Thr Val Leu Asp Cys Glu Glu Lys
                85                  90                  95
Asp Trp Asp Phe Ser Met Asn Leu Asn Val Arg Ser Met Tyr Leu Met
            100                 105                 110
Ile Lys Ala Phe Leu Pro Lys Met Leu Ala Gln Lys Ser Gly Asn Ile
        115                 120                 125
Ile Asn Met Ser Ser Val Ala Ser Ser Val Lys Gly Val Val Asn Arg
        130                 135                 140
Cys Val Tyr Ser Thr Thr Lys Ala Ala Val Ile Gly Leu Thr Lys Ser
145                 150                 155                 160
Val Ala Ala Asp Phe Ile Gln Gln Gly Ile Arg Cys Asn Cys Val Cys
```

5436

```
                         165                170                175
          Pro Gly Thr Val Asp Thr Pro Ser Leu Gln Glu Arg Ile Gln Ala Arg
                     180                185                190
          Gly Asn Pro Glu Glu Ala Arg Asn Asp Phe Leu Lys Arg Gln Lys Thr
                 195                200                205
          Gly Arg Phe Ala Thr Ala Glu Glu Ile Ala Met Leu Cys Val Tyr Leu
             210                215                220
          Ala Ser Asp Glu Ser Ala Tyr Val Thr Gly Asn Pro Val Ile Ile Asp
          225                230                235                240
          Gly Gly Trp Ser Leu
                         245
```

```
<210> 6251
<211> 1611
<212> DNA
<213> Homo sapiens

<400> 6251
tttttttttt tttttttttt tttttttttt tttttttttt ttttccagat caggaagttt
60
tattgctgac atgcaggaag agtccccatg tagtacaaaa atatgtcttt atacaaactt
120
ttttgtgact ttttccgttt ctttacaata ggacttctct cagtgtgtga cacccagtga
180
gggctgaccc atcctcctct cctttgcttc accaggaatg tcatcagaca catggcttga
240
ccttggaagg gcccagtctg tctgacaggg ctttgcagac ccggcggcta ttgctttgaa
300
aaggaggaga aagaccacgc acgggcagca gcctggaggg acccggtggg ctgctgagag
360
ggggctccgc tgcgacgggc cctggcccag cttcaggccc tcacaggagg acagtcaagg
420
gctgggagcc ctaggccgga ctgcatttcc gctcccgcag gagactttct atgaaataaa
480
tatagaaaag agggcatccc ccagccccac agcacaagac cctggccctc agcgctggac
540
agctgagaca gacgcaggct cgctgctcag ggggagtaag tgctgggctc cagtaggctc
600
ccacaggccc actgaggcag aggcatgagt cgcccaagtg ctggatgggg catggggaga
660
aaggggcgtg ggcagccctg ctactgctgg caagaggtgg ccccattttt tccagatggg
720
gaaactgagg cacaaggagg tttgggaact tgcccaaggt cactcacagt gagtcagctt
780
tttaggggga ggagagcggc tcacactctg ggaaacacag tcacctcccc actggggagc
840
agggccaggc aggaggggcc tcagggccca tgactgcctg gaggggacac tcagcctctc
900
tgaggacata tggggggtag gcctctgggg aagggtcttt gcttggcatc aggcagggcc
960
aagtccagta agggcaaggg gaggggggcat tctggtgaga acagcatttc tggcaagacg
1020
ggcatccact tcaaaatctc ggctcaaaag ggcagcaggg ctgttctcaa gccaggcagg
1080
```

cagggtcccc caatccctac aattctcctg agtccctcac caccatggag gacccttgct
1140

agggtctacc gggagagtca ccacatctat tatgaggcaa gggcactggg atatgttccc
1200

accatcccct aaacacaaga gtaggctagg ggagcgtgca ggcagccccc gctcacggcc
1260

aggcctgcag cccaacccat gggccccttc gcactgggag tccacgtgag ctcagtacca
1320

cggggaagga tagagaaggg aacaggttaa cgcgcgtgta cagcacctca gagaagccac
1380

tgagacggga gagaaagagc caggtctaga aaggcctccc atcaccggca gcagagaggg
1440

actggtgggc tgaaagggga cagggactgg caggaggggc ttccctgcct gggggtgagg
1500

agggagctca cgtgtgggct gtggattcct tgctgtccag ccaggctggg ggcagggagt
1560

ggccatggac tgagccacct agagatggga gagaagttgg tatgggtaan a
1611

<210> 6252
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6252
Met Gly Gly Arg Pro Leu Gly Lys Gly Leu Cys Leu Ala Ser Gly Arg
1   5   10   15
Ala Lys Ser Ser Lys Gly Lys Gly Arg Gly His Ser Gly Glu Asn Ser
            20   25   30
Ile Ser Gly Lys Thr Gly Ile His Phe Lys Ile Ser Ala Gln Lys Gly
            35   40   45
Ser Arg Ala Val Leu Lys Pro Gly Arg Gln Gly Pro Pro Ile Pro Thr
        50   55   60
Ile Leu Leu Ser Pro Ser Pro Trp Arg Thr Leu Ala Arg Val Tyr
65   70   75   80
Arg Glu Ser His His Ile Tyr Tyr Glu Ala Arg Ala Leu Gly Tyr Val
                85   90   95
Pro Thr Ile Pro
                100

<210> 6253
<211> 1953
<212> DNA
<213> Homo sapiens

<400> 6253
nngtggggta gcgggcaagg cgggcgccga gtttgcaaag gctcgcagcg gccagaaacc
60

cggctccgag cggcggcggc ccggcttccg ctgcccgtga gctaaggacg gtccgctccc
120

tctagccagc tccgaatcct gatccaggcg ggggccaggg gccctcgcc tccctctga
180

ggaccgaaga tgagcttcct cttcagcagc cgctcttcta aaacattcaa accaaagaag
240

5438

aatatccctg aaggatctca tcagtatgaa ctcttaaaac atgcagaagc aactctagga
300
agtgggaatc tgagacaagc tgttatgttg cctgagggag aggatctcaa tgaatggatt
360
gctgtgaaca ctgtggattt ctttaaccag atcaacatgt tatatggaac tattacagaa
420
ttctgcactg aagcaagctg tccagtcatg tctgcaggtc cgagatatga atatcactgg
480
gcagatggta ctaatattaa aaagccaatc aaatgttctg caccaaaata cattgactat
540
ttgatgactt gggttcaaga tcagcttgat gatgaaactc tttttccttc taagattggt
600
gtcccatttc ccaaaaactt tatgtctgtg gcaaagacta ttctaaagcg tctgttcagg
660
gtttatgccc atatttatca ccagcacttt gattctgtga tgcagctgca agaggaggcc
720
cacctcaaca cctcctttaa gcactttatt ttctttgttc aggagtttaa tctgattgat
780
aggcgtgagc tggcacctct tcaagaatta atagagaaac ttggatcaaa agacagataa
840
atgtttcttc tagaacacag ttaccccctt gcttcatcta ttgctagaac tatctcattg
900
ctatctgtta tagactagtg atacaaactt taagaaaaca ggataaaaag atacccattg
960
cctgtgtcta ctgataaaat tatcccaaag gtaggttggt gtgatagttt ccgagtaaga
1020
ccttaaggac acagccaaat cttaagtact gtgtgaccac tcttgttgtt atcacatagt
1080
catacttggt tgtaatatgt gatggttaac ctgtagctta taaatttact tattattctt
1140
ttactcattt actcagtcat ttctttacaa gaaaatgatt gaatctgttt taggtgacag
1200
cacaatggac attaagaatt tccatcaata atttatgaat aagtttccag aacaaatttc
1260
ctaataacac aatcagattg gttttattct tttattttac gaataaaaaa tgtatttttc
1320
agtacccttg agatttagaa catctgtgtc acttcagata acattttagt ttcaagtttg
1380
tatggtagtg tttttataga taagatacgt ctattttttc aaaattcatg attgcagttt
1440
aaatcatcat atgacgtgtg ggtgggagca accaaagtta ttttacagg gactttattt
1500
tttgatcttt atttgagatt gttttcatat ctatctaaat tattaggagt gtgtgtatca
1560
gaagtaattt tttaatgtct tctaaggatg gtcttccagg cttttaaact gaaaagctta
1620
attcagatag tagcttttgg ctgagaaaag gaatccaaaa tattaataaa tttagatctc
1680
aaaaccacta tttttattat ttcattattt ttcagaggcc ttaaaattct gggtaagaga
1740
atggaggaaa atactcagag tacttgatta ttttatttcc ttttattaaa aaattacttc
1800
tatgtttta ttgtctcttg agccttagtt aagagtagtg tagaaatgca tgaacttcat
1860

5439

```
cctaataagg ataaaactta aggaaaacca caataaacca tgaaggtgta cacatcttaa
1920
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
1953
```

<210> 6254
<211> 216
<212> PRT
<213> Homo sapiens

<400> 6254

```
Met Ser Phe Leu Phe Ser Ser Arg Ser Ser Lys Thr Phe Lys Pro Lys
 1               5                  10                  15
Lys Asn Ile Pro Glu Gly Ser His Gln Tyr Glu Leu Leu Lys His Ala
                20                  25                  30
Glu Ala Thr Leu Gly Ser Gly Asn Leu Arg Gln Ala Val Met Leu Pro
            35                  40                  45
Glu Gly Glu Asp Leu Asn Glu Trp Ile Ala Val Asn Thr Val Asp Phe
        50                  55                  60
Phe Asn Gln Ile Asn Met Leu Tyr Gly Thr Ile Thr Glu Phe Cys Thr
65                  70                  75                  80
Glu Ala Ser Cys Pro Val Met Ser Ala Gly Pro Arg Tyr Glu Tyr His
                85                  90                  95
Trp Ala Asp Gly Thr Asn Ile Lys Lys Pro Ile Lys Cys Ser Ala Pro
            100                 105                 110
Lys Tyr Ile Asp Tyr Leu Met Thr Trp Val Gln Asp Gln Leu Asp Asp
            115                 120                 125
Glu Thr Leu Phe Pro Ser Lys Ile Gly Val Pro Phe Pro Lys Asn Phe
        130                 135                 140
Met Ser Val Ala Lys Thr Ile Leu Lys Arg Leu Phe Arg Val Tyr Ala
145                 150                 155                 160
His Ile Tyr His Gln His Phe Asp Ser Val Met Gln Leu Gln Glu Glu
                165                 170                 175
Ala His Leu Asn Thr Ser Phe Lys His Phe Ile Phe Phe Val Gln Glu
            180                 185                 190
Phe Asn Leu Ile Asp Arg Arg Glu Leu Ala Pro Leu Gln Glu Leu Ile
        195                 200                 205
Glu Lys Leu Gly Ser Lys Asp Arg
    210                 215
```

<210> 6255
<211> 622
<212> DNA
<213> Homo sapiens

<400> 6255

```
nntccggagg ctgagacagg agaatcgctt gaacccagga ggccgaggtt gcagtgagcc
60
gagatcatgc cattgcactc cagcctgggc aacagagtga gacttcatct caaaaaaaaa
120
aaagccacag tggctgcctt cacagccagc gagggccacg cacatcccag ggtagtggag
180
ctacccaaga cggatgaggg cctaggcttc aacatcatgg gtggcaaaga gcaaaactcg
240
```

cccatctaca tctcccgggt catcccaggg ggtgtggctg accgccatgg aggcctcaag
300
cgtggggatc aactgttgtc ggtgaacggt gtgagcgttg agggtgagca gcatgagaag
360
gcggtggagc tgctgaaggc ggcccagggc tcggtgaagc tggttgtccg ttacacaccg
420
cgagtgctgg aggagatgga ggcccggttc gagaagatgc gctctgcccg ccggcgccaa
480
cagcatcaga gctactcgtc cttggagtct cgaggttgaa accacagatc tggacgttca
540
cgtgcactct cttcctgtac agtatttatt gttcctggca ctttatttaa agatttttga
600
ccctcaaaaa aaaaaaaaaa aa
622

<210> 6256
<211> 150
<212> PRT
<213> Homo sapiens

<400> 6256

```
Met Pro Leu His Ser Ser Leu Gly Asn Arg Val Arg Leu His Leu Lys
 1               5                  10                  15
Lys Lys Lys Ala Thr Val Ala Ala Phe Thr Ala Ser Glu Gly His Ala
            20                  25                  30
His Pro Arg Val Val Glu Leu Pro Lys Thr Asp Glu Gly Leu Gly Phe
        35                  40                  45
Asn Ile Met Gly Gly Lys Glu Gln Asn Ser Pro Ile Tyr Ile Ser Arg
    50                  55                  60
Val Ile Pro Gly Gly Val Ala Asp Arg His Gly Gly Leu Lys Arg Gly
65                  70                  75                  80
Asp Gln Leu Leu Ser Val Asn Gly Val Ser Val Glu Gly Glu Gln His
                85                  90                  95
Glu Lys Ala Val Glu Leu Leu Lys Ala Ala Gln Gly Ser Val Lys Leu
            100                 105                 110
Val Val Arg Tyr Thr Pro Arg Val Leu Glu Glu Met Glu Ala Arg Phe
        115                 120                 125
Glu Lys Met Arg Ser Ala Arg Arg Arg Gln Gln His Gln Ser Tyr Ser
    130                 135                 140
Ser Leu Glu Ser Arg Gly
145                 150
```

<210> 6257
<211> 2216
<212> DNA
<213> Homo sapiens

<400> 6257
nttttttttt tttttttttt tttttgctc agcaatcttt attcagttct tcttgggggt
60
gggatgcctc ccttcccatg ctcccacccc tcccatccca gaactccgtt gggctcagtg
120
tcctctgttg agggaaggtc ttggtgccca gatgcctact ctgcaggaga gggaggaacc
180

```
ttgtcccttt gcgggagtcg ctggtctctt ctgttgtggg gaagaaggaa ggtgggaggg
240
gcactgtcca ccagcactca gagctccatt atgtccccag ctggggttgc agggtagggg
300
ggactggggg tgtcccccag cctcagcaga cggagggcct cagggatgag gctgccagga
360
tagcgccaga gaagcagctc agagcaaggg ctcctgagtg ggggcagggc tggggagaag
420
gtcatggggg ggctgcagta ggggtggtca ttgtgcaggc tgagttgaga gaagtgggtg
480
gccatgttct cctcagacag aaactgcttg cgcagaggct cctgctcctc ctccaggcgc
540
cgcttggtgc tcatgggcac agctcctcgg agaggggagc tggcgtccag gccccaagtc
600
accccaagg cggcccgcgg gaggcgctgg gcccctccct gggggcctcg ctgcaagggc
660
tgctgcagga tcattgggtt ttggggtcct gcgggtggga tctgggcgac aggggaggag
720
tctctgaggg cgtggccaag agaggatggg cgtggcttta ggcgggcaca gccgcgaggt
780
tctgcgcggg cgcggaagac gggcggcgcg tggcggaagg caggcttgct cctcggggcg
840
ggggagggta tccggcttaa gggggctgcg gtggacacca cttcttaatg tcggggggtct
900
tcgcggcgct cacctcggct cctagggttc gggacggtac gcaccagcca ccttcgcgcc
960
gaaggcggta gggcgccacg gagaggaacc gctctaggca cgtaaggcct cgtgaggttg
1020
cgtcgcgcgc ggagcactct gggacttgta gttctggaga tggagcgagc tgtgccgctc
1080
gcggtgcctc tgggtcagac agaggtgttc caggccttgc agcggctcca tatgaccatc
1140
ttctcccaga gcgtctcacc atgtgggaag tttctggcgg ctggcaacaa ttacgggcag
1200
attgccatct tcagcttgtc ctctgctttg agctcagaag ccaaagagga aagtaagaag
1260
ccggtggtga ctttccaagc ccatgatggg cccgtctata gcatggtttc caccgatcga
1320
catctgctta gtgctgggga tggggaggtg aaggcctggc tttgggcgga gatgctcaag
1380
aagggctgta aggagctgtg gcgtcgtcag cctccataca ggaccagcct ggaagtgcct
1440
gagatcaacg ctttgctgct ggtccccaag gagaattccc tcatcctggc tggggagac
1500
tgtcagttgc acactatgga ccttgaaact gggactttca cgagggtcct ccggggccac
1560
acagactaca tccactgcct ggcactgcgg gaaaggagcc cagaggtgct gtcaggtggc
1620
gaggatggag ctgttcgact ttgggacctg cgcacagcca aggaggtcca gacgatcgag
1680
tctataagca cgaggagtgc tcgaggcccc acaatgggcg ctggattgga tgtttggact
1740
gattccgact ggatggtctg tggagggggc ccagccctca ccctctggca cctccgatcc
1800
```

```
tccacaccca ccaccatctt ccccatccgg gcgccacaga agcacgtcac cttctaccag
1860
gacctgattc tgtcagctgg ccagggccgc tgcgtcaacc agtggcagct gagcggggag
1920
ctgaaggccc aggtgcctgg ctcctcccca gggctgctca gcctcagcct caaccagcag
1980
cctgccgcgc ctgagtgcaa ggtcctgaca gctgcaggca acagctgccg ggtggatgtc
2040
ttcaccaacc tgggttaccg agccttctcc ctgtccttct gatctctgac gacacccca
2100
gccagctcag ggttttagag tgttttttcat tttcttttt tttttttttt tacaataaag
2160
tttcaggctt tttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2216
```

<210> 6258
<211> 340
<212> PRT
<213> Homo sapiens

<400> 6258

```
Met Glu Arg Ala Val Pro Leu Ala Val Pro Leu Gly Gln Thr Glu Val
1               5                   10                  15
Phe Gln Ala Leu Gln Arg Leu His Met Thr Ile Phe Ser Gln Ser Val
            20                  25                  30
Ser Pro Cys Gly Lys Phe Leu Ala Ala Gly Asn Asn Tyr Gly Gln Ile
            35                  40                  45
Ala Ile Phe Ser Leu Ser Ser Ala Leu Ser Ser Glu Ala Lys Glu Glu
        50                  55                  60
Ser Lys Lys Pro Val Val Thr Phe Gln Ala His Asp Gly Pro Val Tyr
65                  70                  75                  80
Ser Met Val Ser Thr Asp Arg His Leu Leu Ser Ala Gly Asp Gly Glu
                85                  90                  95
Val Lys Ala Trp Leu Trp Ala Glu Met Leu Lys Lys Gly Cys Lys Glu
            100                 105                 110
Leu Trp Arg Arg Gln Pro Pro Tyr Arg Thr Ser Leu Glu Val Pro Glu
            115                 120                 125
Ile Asn Ala Leu Leu Leu Val Pro Lys Glu Asn Ser Leu Ile Leu Ala
        130                 135                 140
Gly Gly Asp Cys Gln Leu His Thr Met Asp Leu Glu Thr Gly Thr Phe
145                 150                 155                 160
Thr Arg Val Leu Arg Gly His Thr Asp Tyr Ile His Cys Leu Ala Leu
                165                 170                 175
Arg Glu Arg Ser Pro Glu Val Leu Ser Gly Gly Glu Asp Gly Ala Val
            180                 185                 190
Arg Leu Trp Asp Leu Arg Thr Ala Lys Glu Val Gln Thr Ile Glu Ser
            195                 200                 205
Ile Ser Thr Arg Ser Ala Arg Gly Pro Thr Met Gly Ala Gly Leu Asp
        210                 215                 220
Val Trp Thr Asp Ser Asp Trp Met Val Cys Gly Gly Gly Pro Ala Leu
225                 230                 235                 240
Thr Leu Trp His Leu Arg Ser Ser Thr Pro Thr Thr Ile Phe Pro Ile
                245                 250                 255
Arg Ala Pro Gln Lys His Val Thr Phe Tyr Gln Asp Leu Ile Leu Ser
```

```
              260                265                270
Ala Gly Gln Gly Arg Cys Val Asn Gln Trp Gln Leu Ser Gly Glu Leu
          275                280                285
Lys Ala Gln Val Pro Gly Ser Ser Pro Gly Leu Leu Ser Leu Ser Leu
      290                295                300
Asn Gln Gln Pro Ala Ala Pro Glu Cys Lys Val Leu Thr Ala Ala Gly
305                310                315                320
Asn Ser Cys Arg Val Asp Val Phe Thr Asn Leu Gly Tyr Arg Ala Phe
              325                330                335
Ser Leu Ser Phe
          340
```

```
<210> 6259
<211> 384
<212> DNA
<213> Homo sapiens
```

```
<400> 6259
ccatgcagcg atcccataga acacagctca gagtctgata acagtgtcct tgaaattcca
60
gatgctttcg atagaacaga gaacatgtta tctatgcaga aaaatgaaaa gataaagtat
120
tctaggtttg ctgccacaaa cactagggta aaagcaaaac agaagcctct cattagtaac
180
tcacatacag accacttaat gggttgtact aagagtgcag agcctggaac cgagacgtct
240
caggttaatt ccttctctga tctgaaggca tctactcttg ttcacaaacc ccagtcagat
300
tttacaaatg atgctctctc tccaaaattc aacctgtcat caagcatatc cagtgagaac
360
tcgttaataa agggtggggc agca
384
```

```
<210> 6260
<211> 128
<212> PRT
<213> Homo sapiens
```

```
<400> 6260
Pro Cys Ser Asp Pro Ile Glu His Ser Ser Glu Ser Asp Asn Ser Val
1               5                10                15
Leu Glu Ile Pro Asp Ala Phe Asp Arg Thr Glu Asn Met Leu Ser Met
          20                25                30
Gln Lys Asn Glu Lys Ile Lys Tyr Ser Arg Phe Ala Ala Thr Asn Thr
          35                40                45
Arg Val Lys Ala Lys Gln Lys Pro Leu Ile Ser Asn Ser His Thr Asp
      50                55                60
His Leu Met Gly Cys Thr Lys Ser Ala Glu Pro Gly Thr Glu Thr Ser
65                70                75                80
Gln Val Asn Ser Phe Ser Asp Leu Lys Ala Ser Thr Leu Val His Lys
              85                90                95
Pro Gln Ser Asp Phe Thr Asn Asp Ala Leu Ser Pro Lys Phe Asn Leu
          100                105                110
Ser Ser Ser Ile Ser Ser Glu Asn Ser Leu Ile Lys Gly Gly Ala Ala
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115   120   125

<210> 6261
<211> 3619
<212> DNA
<213> Homo sapiens

<400> 6261
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120
ggtccgggcc attttccggg ccgggcgcac taaggtgcgc ggccccgggg cccagtatat
180
gacccgccgt cctgctatcc ttcgcttccc ccgccccatg tggctgcggg gccgcggcgg
240
cgctgcccac tatggcccgg aaagtagtta gcaggaagcg gaaagcgccc gcctcgccgg
300
gagctgggag cgacgctcat gggcccgcag tttggctggg atcactcgct tcacaaaagg
360
aaaagacttc ctcctgtgaa gagatcctta gtatactact tgaagaaccg ggaagtcagg
420
ctacagaatg aaaccagcta ctctcgagtg ttgcatggtt atgcagcaca gcaacttccc
480
agtctcctga aggagagaga gtttcacctt gggacccta ataaagtgtt tgcatctcag
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tggttgaatc ataggcaagt ggtgtgtggc acaaaatgca acacgctatt tgtcgtagat
600
gtccagacaa gccagatcac caagatcccc attctgaaag accgggagcc tggaggtgtg
660
acccagcagg gctgtggtat ccatgccatc gagctgaatc cttctagaac actgctagcc
720
actggaggag acaaccccaa cagtcttgcc atctatcgac tacctacgct ggatcctgtg
780
tgtgtaggag atgatggaca caaggactgg atcttttcca tcgcatggat cagcgacact
840
atggcagtgt ctggctcacg tgatggttct atgggactct gggaggtgac agatgatgtt
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1020
gctctggcct tcaacaacaa gaacaaggaa ctgggagcag tgtctctgga tggctacttt
1080
catctctgga aggctgaaaa tacactatct aagctcctct ccaccaaact gccatattgc
1140
cgtgagaatg tgtgtctggc ttatggtagt gaatggtcag tttatgcagt gggctcccaa
1200
gctcatgtct ccttcttgga tccacggcag ccatcataca cgtcaagtc tgtctgttcc
1260
agggagcgag gcagtggaat ccggtcagtg agtttctacg agcacatcat cactgtggga
1320
acagggcagg gctccctgct gttctatgac atccgagctc agagatttct ggaagagagg
1380

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ctctcagctt gttatgggtc caagcccaga ctagcagggg agaatctgaa actaaccact
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1620
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1680
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1800
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1980
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2100
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2160
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2220
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2280
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2340
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2400
cccaccctca catctgctta gccagtagcc acccctaa aacatcagac tcaccatcca
2460
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2520
tctccttccc ctcaagacct gatctggttt taaggggcct ggagctggga gtctcaagtc
2580
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2640
caatctcccc agtgggtttt gctattattt tctaaattgg gttaagtcta agaaggtggg
2700
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2820
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2880
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2940
agctgactgt gatgtccact tgttccctga tttttacaca tcatgtcaaa gataacagct
3000
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gttcccaccc accagttcct ctaagcacat actctgcttt tctgtcaaca tcccattttg
3060

gggaaaggaa aagtcatatt tattcctgca ccccagtttt ttaacttgtt ctcccagttg
3120

tcccctctt ctctgggtgt aagaagggaa attggaaaaa aaattatata tatattctcc
3180

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3240

agcacatacc acaggttctg gaattctcat cttcgaacct agagaaatag gtgctataaa
3300

cagggaatta agcaaaatgc tggatgctat agatctttta attgtcttaa ttttttttct
3360

attattaaac tacaggctgt agatttctta gttctcacag aacttctatc attttaaact
3420

gacttgtata tttaaaaaaa aaatcttcag taggatgttt tgtactattg ctagaccctc
3480

ttctgtaatg ggtaatgcgt ttgattgttt gagattttct gtttttaaaa atgtagcact
3540

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3600

aaaaaaaaa aaaaaaaaa
3619

<210> 6262
<211> 431
<212> PRT
<213> Homo sapiens

<400> 6262
Met Gly Pro Gln Phe Gly Trp Asp His Ser Leu His Lys Arg Lys Arg
1   5   10   15
Leu Pro Pro Val Lys Arg Ser Leu Val Tyr Tyr Leu Lys Asn Arg Glu
            20   25   30
Val Arg Leu Gln Asn Glu Thr Ser Tyr Ser Arg Val Leu His Gly Tyr
        35   40   45
Ala Ala Gln Gln Leu Pro Ser Leu Leu Lys Glu Arg Glu Phe His Leu
    50   55   60
Gly Thr Leu Asn Lys Val Phe Ala Ser Gln Trp Leu Asn His Arg Gln
65   70   75   80
Val Val Cys Gly Thr Lys Cys Asn Thr Leu Phe Val Val Asp Val Gln
                85   90   95
Thr Ser Gln Ile Thr Lys Ile Pro Ile Leu Lys Asp Arg Glu Pro Gly
            100   105   110
Gly Val Thr Gln Gln Gly Cys Gly Ile His Ala Ile Glu Leu Asn Pro
        115   120   125
Ser Arg Thr Leu Leu Ala Thr Gly Gly Asp Asn Pro Asn Ser Leu Ala
    130   135   140
Ile Tyr Arg Leu Pro Thr Leu Asp Pro Val Cys Val Gly Asp Asp Gly
145   150   155   160
His Lys Asp Trp Ile Phe Ser Ile Ala Trp Ile Ser Asp Thr Met Ala
                165   170   175
Val Ser Gly Ser Arg Asp Gly Ser Met Gly Leu Trp Glu Val Thr Asp
                180   185   190
Asp Val Leu Thr Lys Ser Asp Ala Arg His Asn Val Ser Arg Val Pro

```
            195                    200                    205
Val Tyr Ala His Ile Thr His Lys Ala Leu Lys Asp Ile Pro Lys Glu
        210                    215                    220
Asp Thr Asn Pro Asp Asn Cys Lys Val Arg Ala Leu Ala Phe Asn Asn
225                    230                    235                    240
Lys Asn Lys Glu Leu Gly Ala Val Ser Leu Asp Gly Tyr Phe His Leu
                245                    250                    255
Trp Lys Ala Glu Asn Thr Leu Ser Lys Leu Leu Ser Thr Lys Leu Pro
            260                    265                    270
Tyr Cys Arg Glu Asn Val Cys Leu Ala Tyr Gly Ser Glu Trp Ser Val
            275                    280                    285
Tyr Ala Val Gly Ser Gln Ala His Val Ser Phe Leu Asp Pro Arg Gln
        290                    295                    300
Pro Ser Tyr Asn Val Lys Ser Val Cys Ser Arg Glu Arg Gly Ser Gly
305                    310                    315                    320
Ile Arg Ser Val Ser Phe Tyr Glu His Ile Ile Thr Val Gly Thr Gly
                325                    330                    335
Gln Gly Ser Leu Leu Phe Tyr Asp Ile Arg Ala Gln Arg Phe Leu Glu
            340                    345                    350
Glu Arg Leu Ser Ala Cys Tyr Gly Ser Lys Pro Arg Leu Ala Gly Glu
            355                    360                    365
Asn Leu Lys Leu Thr Thr Gly Lys Gly Trp Leu Asn His Asp Glu Thr
        370                    375                    380
Trp Arg Asn Tyr Phe Ser Asp Ile Asp Phe Phe Pro Asn Ala Val Tyr
385                    390                    395                    400
Thr His Cys Tyr Asp Ser Ser Gly Thr Lys Leu Phe Val Ala Gly Gly
                405                    410                    415
Pro Leu Pro Ser Gly Leu His Gly Asn Tyr Ala Gly Leu Trp Ser
                420                    425                    430
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<210> 6263
<211> 2508
<212> DNA
<213> Homo sapiens

<400> 6263
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120
ggggcgcctg aaggttaccg agtgcatgag cgcctagcgc ttcccgcgct gccccgcccg
180
ctggcccgcc gacccgcccg ccggctcgcc cgccagcccc tcggcgcccg gcggcggcgg
240
cggcggtggc ggcgacggtc gcaggaggtg ccgtctgcct cccaggtgcg cgcttcgctc
300
ccggagccgc ggaactcggc ggccgccatg gcgtccaaca tggaccggga gatgatcctg
360
gcggattttc aggcatgtac tggcattgaa aacattgacg aagctattac attgcttgaa
420
caaaataatt gggacttagt ggcagctatc aatggtgtaa taccacagga aaatggcatt
480
ctacaaagtg aatatggagg tgagaccata ccaggacctg catttaatcc agcaagtcat
540

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ccagcttcag ctcctacttc ctcttcttct tcagcgtttc gacctgtaat gccatccagg
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660
gttgatgtgg tacttgaaga cacctgtact gttggagaga ttaaacagat tctagaaaat
720
gaacttcaga tacctgtgtc caaaatgctg ttaaaaggct ggaagacggg agatgtggaa
780
gacagtacgg tcctaaaatc tctacacttg ccaaaaaaca acagtcttta tgtccttaca
840
ccagatttgc caccaccttc atcatctagt catgctggtg ccctgcagga gtcattaaat
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960
tcaggaagca gtactattca agaggtaaag agaaatgtgt atgaccttac aagtatcccc
1020
gttcgccacc aattatggga gggctggcca acttctgcta cagacgactc aatgtgtctt
1080
gctgaatcag ggctctctta tccctgccat cgacttacag tgggaagaag atcttcacct
1140
gcacagaccc gggaacagtc ggaagaacaa atcaccgatg ttcatatggt tagtgatagc
1200
gatggagatg actttgaaga tgctacagaa tttggggtgg atgatggaga agtatttggc
1260
atggcgtcat ctgccttgag aaaatctcca atgatttgtt ttttagtgcc agaaaacgca
1320
gaaaatgaag gagatgcctt attacaattt acagcagagt tttcttcaag atatggtgat
1380
tgccatcctg tattttttat tggctcatta gaagctgctt ttcaagaggc cttctatgtg
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1500
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1620
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1680
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1740
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1800
acagcccaac aacaggaaga tataaaggac gaggatgaac gtgaagccag agaaaatgtg
1860
aagagagagc aagatgaggc ctatcgcctt tcacttgagg ctgacagagc aaagagggaa
1920
gctcacgaga gagagatggc agaacagttt cgtttggagc agattcgcaa agaacaagaa
1980
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2040
gaaaatgctg agcctgtgag caaactgcgg atccggaccc ccagtggcga gttcttggag
2100
cggcgtttcc tggccagcaa caagctccag attgtctttg attttgtagc ttccaaagga
2160
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tttccatggg atgagtacaa gttactgagc acctttccta ggagagacgt aactcaactg
2220
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2280
gcaaaagagt aaacacggcc cagcggtgga accagccatt ccttgacaag ccagcagcct
2340
gcgtcaggag aagggctcct cgccaaccca cccacacgct cgtctcactc aattcaatgt
2400
cacacttctg cctcttgcaa aattgctgga aaaagtaata ataaatatag ctacttaaga
2460
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2508
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<210> 6264
<211> 654
<212> PRT
<213> Homo sapiens
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<400> 6264
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Cys Thr Gly Ile Glu Asn Ile Asp Glu Ala Ile Thr Leu Leu Glu Gln
            20                  25                  30
Asn Asn Trp Asp Leu Val Ala Ala Ile Asn Gly Val Ile Pro Gln Glu
        35                  40                  45
Asn Gly Ile Leu Gln Ser Glu Tyr Gly Gly Glu Thr Ile Pro Gly Pro
    50                  55                  60
Ala Phe Asn Pro Ala Ser His Pro Ala Ser Ala Pro Thr Ser Ser Ser
65                  70                  75                  80
Ser Ser Ala Phe Arg Pro Val Met Pro Ser Arg Gln Ile Val Glu Arg
                85                  90                  95
Gln Pro Arg Met Leu Asp Phe Arg Val Glu Tyr Arg Asp Arg Asn Val
            100                 105                 110
Asp Val Val Leu Glu Asp Thr Cys Thr Val Gly Glu Ile Lys Gln Ile
            115                 120                 125
Leu Glu Asn Glu Leu Gln Ile Pro Val Ser Lys Met Leu Leu Lys Gly
    130                 135                 140
Trp Lys Thr Gly Asp Val Glu Asp Ser Thr Val Leu Lys Ser Leu His
145                 150                 155                 160
Leu Pro Lys Asn Asn Ser Leu Tyr Val Leu Thr Pro Asp Leu Pro Pro
                165                 170                 175
Pro Ser Ser Ser Ser His Ala Gly Ala Leu Gln Glu Ser Leu Asn Gln
            180                 185                 190
Asn Phe Met Leu Ile Ile Thr His Arg Glu Val Gln Arg Glu Tyr Asn
            195                 200                 205
Leu Asn Phe Ser Gly Ser Ser Thr Ile Gln Glu Val Lys Arg Asn Val
    210                 215                 220
Tyr Asp Leu Thr Ser Ile Pro Val Arg His Gln Leu Trp Glu Gly Trp
225                 230                 235                 240
Pro Thr Ser Ala Thr Asp Asp Ser Met Cys Leu Ala Glu Ser Gly Leu
                245                 250                 255
Ser Tyr Pro Cys His Arg Leu Thr Val Gly Arg Arg Ser Ser Pro Ala
            260                 265                 270
Gln Thr Arg Glu Gln Ser Glu Glu Gln Ile Thr Asp Val His Met Val
```

```
              275                   280                   285
    Ser Asp Ser Asp Gly Asp Asp Phe Glu Asp Ala Thr Glu Phe Gly Val
      290                   295                   300
    Asp Asp Gly Glu Val Phe Gly Met Ala Ser Ser Ala Leu Arg Lys Ser
    305                   310                   315                   320
    Pro Met Ile Cys Phe Leu Val Pro Glu Asn Ala Glu Asn Glu Gly Asp
                  325                   330                   335
    Ala Leu Leu Gln Phe Thr Ala Glu Phe Ser Ser Arg Tyr Gly Asp Cys
                  340                   345                   350
    His Pro Val Phe Phe Ile Gly Ser Leu Glu Ala Ala Phe Gln Glu Ala
                  355                   360                   365
    Phe Tyr Val Lys Ala Arg Asp Arg Lys Leu Leu Ala Ile Tyr Leu His
      370                   375                   380
    His Asp Glu Ser Val Leu Thr Asn Val Phe Cys Ser Gln Met Leu Cys
    385                   390                   395                   400
    Ala Glu Ser Ile Val Ser Tyr Leu Ser Gln Asn Phe Ile Thr Trp Ala
                  405                   410                   415
    Trp Asp Leu Thr Lys Asp Ser Asn Arg Ala Arg Phe Leu Thr Met Cys
                  420                   425                   430
    Asn Arg His Phe Gly Ser Val Val Ala Gln Thr Ile Arg Thr Gln Lys
                  435                   440                   445
    Thr Asp Gln Phe Pro Leu Phe Leu Ile Ile Met Gly Lys Arg Ser Ser
      450                   455                   460
    Asn Glu Val Leu Asn Val Ile Gln Gly Asn Thr Thr Val Asp Glu Leu
    465                   470                   475                   480
    Met Met Arg Leu Met Ala Ala Met Glu Ile Phe Thr Ala Gln Gln Gln
                  485                   490                   495
    Glu Asp Ile Lys Asp Glu Asp Glu Arg Glu Ala Arg Glu Asn Val Lys
                  500                   505                   510
    Arg Glu Gln Asp Glu Ala Tyr Arg Leu Ser Leu Glu Ala Asp Arg Ala
                  515                   520                   525
    Lys Arg Glu Ala His Glu Arg Glu Met Ala Glu Gln Phe Arg Leu Glu
      530                   535                   540
    Gln Ile Arg Lys Glu Gln Glu Glu Glu Arg Glu Ala Ile Arg Leu Ser
    545                   550                   555                   560
    Leu Glu Gln Ala Leu Pro Pro Glu Pro Lys Glu Glu Asn Ala Glu Pro
                  565                   570                   575
    Val Ser Lys Leu Arg Ile Arg Thr Pro Ser Gly Glu Phe Leu Glu Arg
                  580                   585                   590
    Arg Phe Leu Ala Ser Asn Lys Leu Gln Ile Val Phe Asp Phe Val Ala
                  595                   600                   605
    Ser Lys Gly Phe Pro Trp Asp Glu Tyr Lys Leu Leu Ser Thr Phe Pro
      610                   615                   620
    Arg Arg Asp Val Thr Gln Leu Asp Pro Asn Lys Ser Leu Leu Glu Val
    625                   630                   635                   640
    Lys Leu Phe Pro Gln Glu Thr Leu Phe Leu Glu Ala Lys Glu
                  645                   650
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<210> 6265
<211> 1344
<212> DNA
<213> Homo sapiens

<400> 6265

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aacacctctg gtagtggaac aattcttata gatctgtctc ctgatgataa agagtttcag
120

tctgtggagg aagagatgca aagtacagtt cgagagcaca gagatggagg tcatgcaggt
180

ggaatcttca acagatacaa tattctcaag attcagaagg tttgtaacaa gaaactatgg
240

gaaagataca ctcaccggag aaaagaagtt tctgaagaaa ccacaacca tgccaatgaa
300

cgaatgctat ttcatgggtc tcctttgtg aatgcaatta tccacaaagg ctttgatgaa
360

aggcatgcgt acataggtgg tatgtttgga gctggcattt attttgctga aaactcttcc
420

aaaagcaatc aatatgtata tggaattgga ggaggtactg ggtgtccagt tcacaaagac .
480

agatcttgtt acatttgcca caggcagctg ctcttttgcc gggtaacctt gggaaagtct
540

ttcctgcagt tcagtgcaat gaaaatggca cattctcctc caggtcatca ctcagtcact
600

ggtaggccca gtgtaaatgg cctagcatta gctgaatatg ttatttacag aggagaacag
660

gcttatcctg agtatttaat tacttaccag attatgaggc ctgaaggtat ggtcgatgga
720

taaatagtta ttttaagaaa ctaattccac tgaacctaaa atcatcaaag cagcagtggc
780

ctctacgttt tactcctttg ctgaaaaaaa atcatcttgc ccacaggcct gtggcaaaag
840

gataaaaatg tgaacgaagt ttaacattct gacttgataa agctttaata atgtacagtg
900

ttttctaaat atttcctgtt ttttcagcac tttaacagat gccattccag gttaaactgg
960

gttgtctgta ctaaattata aacagagtta acttgaacct tttatatgtt atgcattgat
1020

tctaacaaac tgtaatgccc tcaacagaac taattttact aatacaatac tgtgttcttt
1080

aaaacacagc atttacactg aatacaattt catttgtaaa actgtaaata agagcttttg
1140

tactagccca gtatttattt acattgcttt gtaatataaa tctgtttttag aactgcagcg
1200

gtttacaaaa tttttttcata tgtattgttc atctatactt catcttacat cgtcatgatt
1260

gagtgatctt tacatttgat tccagaggct atgttcagtt gttagttggg aaagattgag
1320

ttatcagatt taatttgccg atgg
1344

<210> 6266
<211> 240
<212> PRT
<213> Homo sapiens

<400> 6266
Xaa Ala Leu Pro Ala Ser His Arg Pro Gly Gln Gln Gly Leu Asn Pro

5452

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1                 5                    10                   15
Tyr Leu Thr Leu Asn Thr Ser Gly Ser Gly Thr Ile Leu Ile Asp Leu
            20                25                30
Ser Pro Asp Asp Lys Glu Phe Gln Ser Val Glu Glu Glu Met Gln Ser
        35                40                45
Thr Val Arg Glu His Arg Asp Gly Gly His Ala Gly Gly Ile Phe Asn
    50                55                60
Arg Tyr Asn Ile Leu Lys Ile Gln Lys Val Cys Asn Lys Lys Leu Trp
65                70                75                80
Glu Arg Tyr Thr His Arg Arg Lys Glu Val Ser Glu Glu Asn His Asn
            85                90                95
His Ala Asn Glu Arg Met Leu Phe His Gly Ser Pro Phe Val Asn Ala
            100               105               110
Ile Ile His Lys Gly Phe Asp Glu Arg His Ala Tyr Ile Gly Gly Met
            115               120               125
Phe Gly Ala Gly Ile Tyr Phe Ala Glu Asn Ser Ser Lys Ser Asn Gln
        130               135               140
Tyr Val Tyr Gly Ile Gly Gly Gly Thr Gly Cys Pro Val His Lys Asp
145               150               155               160
Arg Ser Cys Tyr Ile Cys His Arg Gln Leu Leu Phe Cys Arg Val Thr
            165               170               175
Leu Gly Lys Ser Phe Leu Gln Phe Ser Ala Met Lys Met Ala His Ser
            180               185               190
Pro Pro Gly His His Ser Val Thr Gly Arg Pro Ser Val Asn Gly Leu
            195               200               205
Ala Leu Ala Glu Tyr Val Ile Tyr Arg Gly Glu Gln Ala Tyr Pro Glu
    210               215               220
Tyr Leu Ile Thr Tyr Gln Ile Met Arg Pro Glu Gly Met Val Asp Gly
225               230               235               240
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<210> 6267
<211> 328
<212> DNA
<213> Homo sapiens

<400> 6267
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120
gatgagcctt tcctgcagtt ccgaaggaac gtgttcttcc caaagcggcg ggagctccag
180
atccatgacg aggaggtcct gcggctgctc tatgaggagg ccaagggcaa cgtgctggct
240
gcacggtacc cgtgcgacgt ggaggactgc gaggctctgg gcgccctggt gtgccgcgtg
300
cagcttgggc cctaccagcc cggccggc
328

<210> 6268
<211> 83
<212> PRT
<213> Homo sapiens
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<400> 6268
Ala Glu Trp Gly Cys Pro Ala Val Thr Gln Pro Leu Ser Pro Asp Glu
 1               5                  10                  15
Pro Phe Leu Gln Phe Arg Arg Asn Val Phe Phe Pro Lys Arg Arg Glu
                20                  25                  30
Leu Gln Ile His Asp Glu Glu Val Leu Arg Leu Leu Tyr Glu Glu Ala
            35                  40                  45
Lys Gly Asn Val Leu Ala Ala Arg Tyr Pro Cys Asp Val Glu Asp Cys
        50                  55                  60
Glu Ala Leu Gly Ala Leu Val Cys Arg Val Gln Leu Gly Pro Tyr Gln
65                  70                  75                  80
Pro Gly Arg
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<210> 6269
<211> 923
<212> DNA
<213> Homo sapiens

<400> 6269
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gctttagatc aactgcggga cgtgattgag tctcaggagg aactaatcca ccagctgagg
120
aacgtgatgg ttctccagga cgaaaatttt gtcagtaaag aagagttcca ggcagtggag
180
aagaagctgg tggaagagaa agctgcccat gccaaaacca aggtcctcct ggccaaggaa
240
gaggagaagt tacagtttgc cctcggagag gtagaggtgc tatccaagca gctggagaaa
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gagaagctgg cctttgaaaa agcgctctcc agtgtcaaga gcaaagtcct tcaggagtcc
360
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420
gaagatatac ttaatggcaa agagaatgag attaaagagt tgcagcaagt tatcagccag
480
cagaaacaga tcttcagccc accaccagcc ggctccgttg caggaatcac atgtctgact
540
tccggatcca gaagcagcag gaaagctaca tggcccaggt gctggaccag aagcataaga
600
aagcctcagg acacgtcag gcccgcagcc accagcatcc cagggaaaaa taaaatggcc
660
gccgctttcc tgttctctgg ctgtaatccc cagcctctgc cttctctgct ctgggagtcc
720
ccagcctcta gcccctgcta cttccctccc tcttggatag tggtaggggt ccacaaggtg
780
ggggcttgta gcctagggga ggagctgggt ctttgttgtc tggtaggcac caccgcttcc
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923
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<210> 6270
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<211> 307
<212> PRT
<213> Homo sapiens

<400> 6270
Xaa Arg Lys Met Ala Thr Pro Leu Gly Trp Ser Lys Ala Gly Ser Gly
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Ser Val Cys Leu Ala Leu Asp Gln Leu Arg Asp Val Ile Glu Ser Gln
        20                  25                  30
Glu Glu Leu Ile His Gln Leu Arg Asn Val Met Val Leu Gln Asp Glu
        35                  40                  45
Asn Phe Val Ser Lys Glu Glu Phe Gln Ala Val Glu Lys Lys Leu Val
        50                  55                  60
Glu Glu Lys Ala Ala His Ala Lys Thr Lys Val Leu Leu Ala Lys Glu
65                  70                  75                  80
Glu Glu Lys Leu Gln Phe Ala Leu Gly Glu Val Glu Val Leu Ser Lys
                85                  90                  95
Gln Leu Glu Lys Glu Lys Leu Ala Phe Glu Lys Ala Leu Ser Ser Val
            100                 105                 110
Lys Ser Lys Val Leu Gln Glu Ser Ser Lys Lys Asp Gln Leu Ile Thr
        115                 120                 125
Lys Cys Asn Glu Ile Glu Ser His Ile Ile Lys Gln Glu Asp Ile Leu
        130                 135                 140
Asn Gly Lys Glu Asn Glu Ile Lys Glu Leu Gln Gln Val Ile Ser Gln
145                 150                 155                 160
Gln Lys Gln Ile Phe Ser Pro Pro Pro Ala Gly Ser Val Ala Gly Ile
                165                 170                 175
Thr Cys Leu Thr Ser Gly Ser Arg Ser Ser Arg Lys Ala Thr Trp Pro
            180                 185                 190
Arg Cys Trp Thr Arg Ser Ile Arg Lys Pro Gln Gly His Val Arg Pro
            195                 200                 205
Ala Ala Thr Ser Ile Pro Gly Lys Asn Lys Met Ala Ala Ala Phe Leu
        210                 215                 220
Phe Ser Gly Cys Asn Pro Gln Pro Leu Pro Ser Leu Leu Trp Glu Ser
225                 230                 235                 240
Pro Ala Ser Ser Pro Cys Tyr Phe Pro Pro Ser Trp Ile Val Val Gly
                245                 250                 255
Val His Lys Val Gly Ala Cys Ser Leu Gly Glu Glu Leu Gly Leu Cys
            260                 265                 270
Cys Leu Val Gly Thr Thr Ala Ser Phe Gly Tyr Leu Ile Pro Ser Tyr
            275                 280                 285
Ile Asn Ser Pro Gly Tyr Pro Val Ile Phe His Pro Thr Pro Ser Val
            290                 295                 300
Leu Val Asn
305

<210> 6271
<211> 1437
<212> DNA
<213> Homo sapiens

<400> 6271
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60
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120
cagtcttcaa gattagctct ccggacagtc tactatcctc aggttcatct ggggaccatt
180
agtggagctg gaatggtgag accaacatcc gtgacacctg gactctttca ggttctgaag
240
gctgtatact ttgcatgtta ctccaaagcc aaagagcaat ttaatggcat tttcgtgcct
300
aacagcaata ttgtgcatct tttctcagct ggctctgcag cttttatcac aaattcctta
360
atgaatccta tatggatggt taaaacccga atgcagctag aacagaaagt gaggggctct
420
aagcagatga atacactcca gtgtgctcgt tacgtttacc agaccgaagg cattcgtggc
480
ttctatagag gattaactgc ctcgtatgct ggaatttccg aaactataat ctgctttgct
540
atttatgaaa gtttaaagaa gtatctgaaa gaagctccat tagcctcttc tgcaaatggg
600
actgagaaaa attccacaag ttttttttgga cttatggcag ctgctgctct ttctaagggc
660
tgtgcctcct gcattgctta tccacacgaa gtcataagga cgaggctccg ggaagagggc
720
accaagtaca agtcttttgt ccagacggcg cgcctggtgt ccgggaaga aggctacctt
780
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840
ttgtctactt atgagttaat tgtgtacctg ttagaagacc gtactcagta acaggccgga
900
aaattgtgct ctagaagaat aaaactgaaa aactctagag aattttttttt ccccattgat
960
gtttagaaag tttgagactg aaacaggaaa ggccataaaa tatctggttc atatcacctg
1020
ttggacattt ccttttggat tcatgctttc tggaaggttt aaattcatta acgttaatag
1080
ttaattataa cttttttttt aacttaagag gattcagggt taagcaccaa ctaaattaaa
1140
tcatgctatt taatttaagt atacatttgg cttgtgtcct cttttatgct cactatacta
1200
tgaaggactt aagtaattca gataaacctg ccctagaact gcagagaaaa atgataaagt
1260
gagaatacaa cttgttttat aatctgactt taagatcttg cactgctaga cagggaagaa
1320
gtgtcgcatt ttggctgggc actgtggctc acgcctgtaa tcccagcact ttgggaggcc
1380
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1437
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<210> 6272
<211> 296
<212> PRT
<213> Homo sapiens

<400> 6272
Xaa Met Ala Thr Gly Gly Gln Gln Lys Glu Asn Thr Leu Leu His Leu

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     Phe Ala Gly Gly Cys Gly Gly Thr Val Gly Ala Ile Phe Thr Cys Pro
                  20                  25                  30
     Leu Glu Val Ile Lys Thr Arg Leu Gln Ser Ser Arg Leu Ala Leu Arg
                  35                  40                  45
     Thr Val Tyr Tyr Pro Gln Val His Leu Gly Thr Ile Ser Gly Ala Gly
              50                  55                  60
     Met Val Arg Pro Thr Ser Val Thr Pro Gly Leu Phe Gln Val Leu Lys
     65                  70                  75                  80
     Ala Val Tyr Phe Ala Cys Tyr Ser Lys Ala Lys Glu Gln Phe Asn Gly
                      85                  90                  95
     Ile Phe Val Pro Asn Ser Asn Ile Val His Leu Phe Ser Ala Gly Ser
                 100                 105                 110
     Ala Ala Phe Ile Thr Asn Ser Leu Met Asn Pro Ile Trp Met Val Lys
                 115                 120                 125
     Thr Arg Met Gln Leu Glu Gln Lys Val Arg Gly Ser Lys Gln Met Asn
                 130                 135                 140
     Thr Leu Gln Cys Ala Arg Tyr Val Tyr Gln Thr Glu Gly Ile Arg Gly
     145                 150                 155                 160
     Phe Tyr Arg Gly Leu Thr Ala Ser Tyr Ala Gly Ile Ser Glu Thr Ile
                 165                 170                 175
     Ile Cys Phe Ala Ile Tyr Glu Ser Leu Lys Lys Tyr Leu Lys Glu Ala
                 180                 185                 190
     Pro Leu Ala Ser Ser Ala Asn Gly Thr Glu Lys Asn Ser Thr Ser Phe
                 195                 200                 205
     Phe Gly Leu Met Ala Ala Ala Ala Leu Ser Lys Gly Cys Ala Ser Cys
                 210                 215                 220
     Ile Ala Tyr Pro His Glu Val Ile Arg Thr Arg Leu Arg Glu Glu Gly
     225                 230                 235                 240
     Thr Lys Tyr Lys Ser Phe Val Gln Thr Ala Arg Leu Val Phe Arg Glu
                 245                 250                 255
     Glu Gly Tyr Leu Ala Phe Tyr Arg Gly Leu Phe Ala Gln Leu Ile Arg
                 260                 265                 270
     Gln Ile Pro Asn Thr Ala Ile Val Leu Ser Thr Tyr Glu Leu Ile Val
                 275                 280                 285
     Tyr Leu Leu Glu Asp Arg Thr Gln
     290                 295
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<210> 6273
<211> 2355
<212> DNA
<213> Homo sapiens

<400> 6273

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120
tggactggct caccaaccag ccgcggccgg cagctggtgg acaaggacag caccttcctc
180
agcacgctgg agcaccacct gagccgctac ctgaaggacg tgaagcagca ccacgtcaag
240
gctgacaagc gggacccaga gtttgtcttc tacgaccagc tgaagcaagt gatgaatgcg
300
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tacagagtca agccggccgt ctttgacctg ctcctggctg ttggcattgc tgcctacctc
360
ggcatggcct acgtggctgt ccaggtgagc agtgcccagg ctcagcactt cagcctcctc
420
tacaagaccg tccagaggct gctcgtgaag gccaagacac agtgacacag ccacccccac
480
agccggagcc cccgccgctc cacagtccct ggggccgagc acgagtgagt ggacactgcc
540
ccgccgcggg cggccctgca gggacagggg ccctctccct ccccggcggt ggttggaaca
600
ctgaattaca gagctttttt ctgttgctct ccgagactgg ggggggattg tttcttcttt
660
tccttgtctt tgaacttcct tggaggagag cttgggagac gtcccggggc caggctacgg
720
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780
atgcacgatt aaagaggaga cgccgggacc ccctgcccga tcgcgcgcgg cctccgccca
840
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900
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960
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1020
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1080
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1140
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1200
gttcccctgc actcctcttc tcccagccca tccctccggc ccctgtgcct ctgcggcccc
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1320
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1380
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1440
ggcccgggga ggccttgtgg ctcctcccct cgctcctcgc cctgggcctc aagttcctca
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1560
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1620
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1680
gagaaggagg cccgtgttga gctcagggag accccggtgt gtccgttctt tagcaatata
1740
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1800
ggcctggcac ccgcagccgt ctcccttccg tggcccaggg aggtgtttgc tgtccgaagg
1860
acctgggccg gcccatggga gcctggggtt ctgtccagat aggaccaggg ggtctcactt
1920
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5458

tggccaccag ttcttcggcc agcacctctg ccctccagaa cctgcagcct ggaggggtga
1980

ggggacaacc acccctcttt cctccaggtt ggcagggac cctcttctcc cgtctgccct
2040

gcgggttgcc cgcctcctcc agagacttgc ccaagggccc atcaccactg gcctctgggc
2100

acttgtgctg agactctggg acccaggcag ctgccacctt gtcaccatga gagaatttgg
2160

ggagtgcttg catgctagcc agcaggctcc tgtctgggtg ccacggggcc agcattttgg
2220

agggagcttc cttccttcct tcctggacag gtcgtcagga tggatgcact gactgaccgt
2280

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2340

gatcaaaaaa aaaaa
2355

<210> 6274
<211> 70
<212> PRT
<213> Homo sapiens

<400> 6274
Asp Pro Glu Phe Val Phe Tyr Asp Gln Leu Lys Gln Val Met Asn Ala
1   5   10   15
Tyr Arg Val Lys Pro Ala Val Phe Asp Leu Leu Leu Ala Val Gly Ile
            20   25   30
Ala Ala Tyr Leu Gly Met Ala Tyr Val Ala Val Gln Val Ser Ser Ala
            35   40   45
Gln Ala Gln His Phe Ser Leu Leu Tyr Lys Thr Val Gln Arg Leu Leu
    50   55   60
Val Lys Ala Lys Thr Gln
65   70

<210> 6275
<211> 1534
<212> DNA
<213> Homo sapiens

<400> 6275
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gggtctggct gctgcctgct tcttgctcca gcaccatgga atgcctgcgc agtttaccct
120

gcctcctgcc ccgcgcgatg agacttcccc ggcggacgct gtgtgccctg gccttggacg
180

tgacctctgt gggtcctccc gttgctgcct gcggccgccg agccaacctg attggaagga
240

gccgagcggc gcagctttgc gggcccgacc ggctccgcgt ggcaggtgaa gtgcaccggt
300

ttagaacctc tgacgtctct caagccactt tagccagtgt agccccagta tttactgtga
360

caaaatttga caaacaggga aacgttactt cttttgaaag gaagaaaact gaattatacc
420

aagagttagg tcttcaagcc agagatttga gatttcagca tgtaatgagt atcacagtca
480
gaaacaatag gattatcatg agaatggagt atttgaaagc tgtgataact ccagagtgtc
540
ttctgatatt agattatcgt aatttaaact tagagcaatg gctgttccgg gaactccctt
600
cacagttgtc tggagagggt caactcgtta catacccttt accttttgag tttagagcta
660
tagaagcact cctgcaatat tggatcatgt tgttatctag atcaacaccc ttcaggggaa
720
acttagcatt ttgcagccac tgatccttga gaccttggat gctttggtgg accccaaaca
780
ttcttctgta gacagaagca aactgcacat tttactacag aatggcaaaa gtctatcaga
840
gttagaaaca gatattaaaa ttttcaaaga gtcaattttg gagatcttgg atgaggaaga
900
gttgctagaa gagctctgtg tatcaaaatg ggagtgaccc acaagtcttt gnaaaagagc
960
agtgctggga ttgaccatgc agaagaaatg gagttgctgt tggaaaacta ctaccgattg
1020
gctgacgatc tctccaatgc agctcgtgag cttagggtgc tgattgatga ttcacaaagt
1080
attattttca ttaatctgga cagccaccga aacgtgatga ttaggttgaa tctacagctg
1140
accatgggaa ccttctctct ttcgctcttt ggactaatgg gagttgcttt tggaatgaat
1200
ttggaatctt cccttgaaga ggaccataga attttttggc tgattacagg aattatgttc
1260
atgggaagtg gcctcatctg gaggcgcctg ctttcattcc ttggacgaca gctagaagct
1320
ccattgcctc ctatgatggc ttctttacct aaaaagactc ttctggcaga tagaagcatg
1380
gaattgaaaa atagcctcag actggatgga cttggatcag gaaggagcat cctaacaaac
1440
cgttaggaac agccccgtgg atactgaagt ttttttatg gtagttacag gaaacttctg
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atactctttt tattattttc ttgtatagag tcag
1534

<210> 6276
<211> 172
<212> PRT
<213> Homo sapiens

<400> 6276
Met Gly Val Thr His Lys Ser Leu Xaa Lys Ser Ser Ala Gly Ile Asp
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His Ala Glu Glu Met Glu Leu Leu Leu Glu Asn Tyr Tyr Arg Leu Ala
            20   25   30
Asp Asp Leu Ser Asn Ala Ala Arg Glu Leu Arg Val Leu Ile Asp Asp
        35   40   45
Ser Gln Ser Ile Ile Phe Ile Asn Leu Asp Ser His Arg Asn Val Met
    50   55   60
Ile Arg Leu Asn Leu Gln Leu Thr Met Gly Thr Phe Ser Leu Ser Leu

```
     65                    70                    75                    80
    Phe Gly Leu Met Gly Val Ala Phe Gly Met Asn Leu Glu Ser Ser Leu
                          85                    90                    95
    Glu Glu Asp His Arg Ile Phe Trp Leu Ile Thr Gly Ile Met Phe Met
                100                   105                   110
    Gly Ser Gly Leu Ile Trp Arg Arg Leu Leu Ser Phe Leu Gly Arg Gln
            115                   120                   125
    Leu Glu Ala Pro Leu Pro Pro Met Met Ala Ser Leu Pro Lys Lys Thr
        130                   135                   140
    Leu Leu Ala Asp Arg Ser Met Glu Leu Lys Asn Ser Leu Arg Leu Asp
    145                   150                   155                   160
    Gly Leu Gly Ser Gly Arg Ser Ile Leu Thr Asn Arg
                      165                   170
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<210> 6277
<211> 1206
<212> DNA
<213> Homo sapiens

<400> 6277

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120
ttccagccgc cacttccgcc cacagatggc agcaccgtgg tgcccgctgg cccagagccc
180
cctccccaga gctctagggc tgaaagcagc tctgggggtg ggactgtccc ctcttccgcg
240
ggcatactgg agcaggggcc gagcccaggc gacggcagtc ctcccaaacc gaaggaccct
300
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360
tcagccccag gcagctgctg gctcccacca gctctccatg ggccacctca caatgctgca
420
gggcccagcc cgcatacact gcgccgagct gttaaaaaac ccgctccagc accccgaaa
480
ccgggcaacc cacctcctgg ccaccccggg ggccagagtt cttcaggaac atctcagcat
540
ccacccagtc tgtcaccaaa gccacccacc cgaagcccct ctcctccacc cagcacacgg
600
gccagcctcc aggccagccc tccgcccccт cccagctctc agcaccccgg aggtactcca
660
ngcagcttgt ctccaatcca agctcccaat cacccaccgc cgcagccccc tacgcaggcc
720
acgccactga tgcacaccaa acccaatagc cagggccctc ccaaccccat ggcattgccc
780
agtgagcatg gacttgagca gccatctcac acccctcccc agactccaac gccccccagt
840
actccgcccc taggaaaaca gaaccccagt ctgccagctc ctcagaccct ggcagggggt
900
aaccctgaaa ctgcacagcc acatgctgga accttaccga gaccgagacc agtaccaaag
960
ccaaggaacc ggcccagcgt gcccccaccc ccccaacctc ctggtgtcca ctcagctggg
1020
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gacagcagcc tcaccaacac agcaccaaca gcttccaaga tagtaacaga ctccaattcc
1080

agggtttcag aaccgcatcg cagcatcttt cctgaaatgc actcagactc agccagcaaa
1140

gacgtgcctg ccgcatcct gctggatata gacaatgata ccgagagcac tgccctgtga
1200

agaaag
1206

<210> 6278
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6278
Ala Ser Met Ala Val Met Glu Gly Asp Leu Val Lys Lys Glu Ser Phe
1   5   10   15
Gly Val Lys Leu Met Asp Phe Gln Ala His Arg Arg Gly Gly Thr Leu
            20   25   30
Asn Arg Lys His Ile Ser Pro Ala Phe Gln Pro Pro Leu Pro Pro Thr
            35   40   45
Asp Gly Ser Thr Val Val Pro Ala Gly Pro Glu Pro Pro Gln Ser
        50   55   60
Ser Arg Ala Glu Ser Ser Ser Gly Gly Gly Thr Val Pro Ser Ser Ala
65   70   75   80
Gly Ile Leu Glu Gln Gly Pro Ser Pro Gly Asp Gly Ser Pro Pro Lys
                85   90   95
Pro Lys Asp Pro Val Ser Ala Ala Val Pro Ala Pro Xaa Glu Lys Gln
            100   105   110
Gln Ser Asp Ser Ile Trp Pro Lys Ser Ala Pro Gly Ser Cys Trp Leu
            115   120   125
Pro Pro Ala Leu His Gly Pro Pro His Asn Ala Ala Gly Pro Ser Pro
        130   135   140
His Thr Leu Arg Arg Ala Val Lys Lys Pro Ala Pro Ala Pro Pro Lys
145   150   155   160
Pro Gly Asn Pro Pro Pro Gly His Pro Gly Gly Gln Ser Ser Ser Gly
                165   170   175
Thr Ser Gln His Pro Pro Ser Leu Ser Pro Lys Pro Pro Thr Arg Ser
            180   185   190
Pro Ser Pro Pro Pro Ser Thr Arg Ala Ser Leu Gln Ala Ser Pro Pro
            195   200   205
Pro Pro Pro Ser Ser Gln His Pro Gly Gly Thr Pro Xaa Ser Leu Ser
        210   215   220
Pro Ile Gln Ala Pro Asn His Pro Pro Pro Gln Pro Pro Thr Gln Ala
225   230   235   240
Thr Pro Leu Met His Thr Lys Pro Asn Ser Gln Gly Pro Pro Asn Pro
                245   250   255
Met Ala Leu Pro Ser Glu His Gly Leu Glu Gln Pro Ser His Thr Pro
                260   265   270
Pro Gln Thr Pro Thr Pro Pro Ser Thr Pro Pro Leu Gly Lys Gln Asn
            275   280   285
Pro Ser Leu Pro Ala Pro Gln Thr Leu Ala Gly Gly Asn Pro Glu Thr
        290   295   300
Ala Gln Pro His Ala Gly Thr Leu Pro Arg Pro Arg Pro Val Pro Lys

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305                    310                    315                    320
Pro Arg Asn Arg Pro Ser Val Pro Pro Pro Gln Pro Pro Gly Val
                325                    330                    335
His Ser Ala Gly Asp Ser Ser Leu Thr Asn Thr Ala Pro Thr Ala Ser
            340                    345                    350
Lys Ile Val Thr Asp Ser Asn Ser Arg Val Ser Glu Pro His Arg Ser
            355                    360                    365
Ile Phe Pro Glu Met His Ser Asp Ser Ala Ser Lys Asp Val Pro Gly
        370                    375                    380
Arg Ile Leu Leu Asp Ile Asp Asn Asp Thr Glu Ser Thr Ala Leu
385                    390                    395
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<210> 6279
<211> 2795
<212> DNA
<213> Homo sapiens

<400> 6279
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120
aaggcaaaca agaatttgg ggatagcctg agtttggaga ttcttcagat tattaaggaa
180
tcccagcagc agcatggttt acggcatgga gattttcaga ggtacagggg ctactgttcc
240
cgtagacaaa gacgtcttcg aaaaacactc aacttcaaga tgggtaacag acacaaattc
300
acagggaaga aagtgactga agagcttctg accgataata gatacttgct tctggttctg
360
atggatgctg aaagagcctg agctacgcc atgcagctga acaggaagc caacactgaa
420
ccccgaaaac ggtttcactt gttatctcgc ctacgcaaag ccgtgaagca tgcagaggaa
480
ttggaacgct tgtgtaagag caatcgcgtg gatgccaaga ccaaattaga ggctcaggct
540
tacacagctt acctctcagg aatgctacgt tttgaacatc aagaatggaa agctgccatt
600
gaggctttta acaaatgcaa aactatctat gagaagctag ccagtgcttt cacagaggag
660
caggctgtgc tgtataacca acgtgtggaa gagatttcac ccaacatccg ctattgtgca
720
tataatattg gggaccagtc agccatcaat gaactcatgc agatgagatt gaggtctggg
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ggcactgaag gtctcttggc tgaaaaattg gaggctttga tcactcagac tcgagccaaa
840
caggcagcta ccatgagtga agtggagtgg agagggagaa cggttccagt gaagattgac
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960
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1020
caggtggttc gggaggagct caagccagat cagaaacaga gagattatat ccttgaagga
1080
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gagccaggga aggtgtctaa tcttcaatac ttgcatagct acctgactta catcaagcta
1140
tcaacggcaa tcaagcgtaa tgagaacatg gccaaaggtc tgcacagggc tctgctgcag
1200
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5464

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<211> 619
<212> PRT
<213> Homo sapiens

<400> 6280
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            20   25   .   30
Asn Glu Arg Pro Ser Ala Gly Ser Lys Ala Asn Lys Glu Phe Gly Asp
        35   40   45
Ser Leu Ser Leu Glu Ile Leu Gln Ile Ile Lys Glu Ser Gln Gln Gln
    50   55   60
His Gly Leu Arg His Gly Asp Phe Gln Arg Tyr Arg Gly Tyr Cys Ser
65   70   75   80
Arg Arg Gln Arg Arg Leu Arg Lys Thr Leu Asn Phe Lys Met Gly Asn
                85   90   95
Arg His Lys Phe Thr Gly Lys Lys Val Thr Glu Glu Leu Leu Thr Asp
            100   105   110
Asn Arg Tyr Leu Leu Leu Val Leu Met Asp Ala Glu Arg Ala Trp Ser
115   120   125
Tyr Ala Met Gln Leu Lys Gln Glu Ala Asn Thr Glu Pro Arg Lys Arg
    130   135   140
Phe His Leu Leu Ser Arg Leu Arg Lys Ala Val Lys His Ala Glu Glu
145   150   155   160
Leu Glu Arg Leu Cys Lys Ser Asn Arg Val Asp Ala Lys Thr Lys Leu
                165   170   175
Glu Ala Gln Ala Tyr Thr Ala Tyr Leu Ser Gly Met Leu Arg Phe Glu
            180   185   190
His Gln Glu Trp Lys Ala Ala Ile Glu Ala Phe Asn Lys Cys Lys Thr
            195   200   205
Ile Tyr Glu Lys Leu Ala Ser Ala Phe Thr Glu Glu Gln Ala Val Leu
    210   215   220
Tyr Asn Gln Arg Val Glu Glu Ile Ser Pro Asn Ile Arg Tyr Cys Ala
225   230   235   240
Tyr Asn Ile Gly Asp Gln Ser Ala Ile Asn Glu Leu Met Gln Met Arg
                245   250   255
Leu Arg Ser Gly Gly Thr Glu Gly Leu Leu Ala Glu Lys Leu Glu Ala
                260   265   270
Leu Ile Thr Gln Thr Arg Ala Lys Gln Ala Ala Thr Met Ser Glu Val
    275   280   285
Glu Trp Arg Gly Arg Thr Val Pro Val Lys Ile Asp Lys Val Arg Ile
    290   295   300
Phe Leu Leu Gly Leu Ala Asp Asn Glu Ala Ala Ile Val Gln Ala Glu
305   310   315   320
Ser Glu Glu Thr Lys Glu Arg Leu Phe Glu Ser Met Leu Ser Glu Cys
                325   330   335
Arg Asp Ala Ile Gln Val Val Arg Glu Glu Leu Lys Pro Asp Gln Lys .

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    Lys Arg Asn Glu Asn Met Ala Lys Gly Leu His Arg Ala Leu Leu Gln
    385                       390                       395                       400
    Gln Gln Pro Glu Asp Asp Ser Lys Arg Ser Pro Arg Pro Gln Asp Leu
                    405                       410                       415
    Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu Leu Gln
            420                       425                       430
    Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile Gly Leu
            435                       440                       445
    Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala Gln Ser
        450                       455                       460
    Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Leu Val Leu Tyr Asp Arg
    465                       470                       475                       480
    Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala Phe Lys
                    485                       490                       495
    Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr Gln Val
                    500                       505                       510
    Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp Ala Asn
            515                       520                       525
    Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp Asn Lys
        530                       535                       540
    Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Asp Pro Ser Leu Val
    545                       550                       555                       560
    Thr Lys Gln Ala Asn Leu Val His Phe Pro Pro Gly Phe Gln Pro Ile
                    565                       570                       575
    Pro Cys Lys Pro Leu Phe Phe Asp Leu Ala Leu Asn His Val Ala Phe
                    580                       585                       590
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    Gly Tyr Ile Lys Gly Ile Phe Gly Phe Arg Ser
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<211> 741
<212> DNA
<213> Homo sapiens

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180
gcggtgctca ctgcagagat caccagcaag attgcgaggg tcccacgact cccgcctgat
240
gaaaagaaac agatggttgc aaatgtggag aaacagcttg aagaagcgaa agaactgctt
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5466

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741

<210> 6282
<211> 162
<212> PRT
<213> Homo sapiens

<400> 6282
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Ala Glu Ile Thr Ser Lys Ile Ala Arg Val Pro Arg Leu Pro Pro Asp
            20   25   30
Glu Lys Lys Gln Met Val Ala Asn Val Glu Lys Gln Leu Glu Glu Ala
            35   40   45
Lys Glu Leu Leu Glu Gln Met Asp Leu Glu Val Arg Glu Ile Pro Pro
        50   55   60
Gln Ser Arg Gly Met Tyr Ser Asn Arg Met Arg Ser Tyr Lys Gln Glu
65   70   75   80
Met Gly Lys Leu Glu Thr Asp Phe Lys Arg Ser Arg Ile Ala Tyr Ser
                85   90   95
Asp Glu Val Arg Asn Glu Leu Leu Gly Asp Asp Gly Asn Ser Ser Glu
            100   105   110
Asn Gln Arg Ala His Leu Leu Asp Asn Thr Glu Arg Leu Glu Arg Ser
            115   120   125
Ser Arg Arg Leu Glu Ala Gly Tyr Gln Ile Ala Val Glu Thr Gly Glu
        130   135   140
Asn Ser Glu Ser Glu Gln Ile Val Leu Leu Met His Ser Ser Leu His
145   150   155   160
Asn Thr

<210> 6283
<211> 2312
<212> DNA
<213> Homo sapiens

<400> 6283
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120

5467

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1740
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5468

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2160
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2312

<210> 6284
<211> 122
<212> PRT
<213> Homo sapiens

<400> 6284
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Ala Val Phe Leu Leu Pro Trp Ala Ser Met Trp Leu Arg Ser Leu Leu
                20   25   30
Lys Pro Ile His Val Phe Phe Gly Ala Ala Ile Leu Ser Leu Ser Ile
            35   40   45
Ala Ser Val Ile Ser Gly Ile Asn Glu Lys Leu Phe Phe Ser Leu Lys
        50   55   60
Asn Thr Thr Arg Pro Tyr His Ser Leu Pro Ser Glu Ala Val Phe Ala
65   70   75   80
Asn Ser Thr Gly Met Leu Val Val Ala Phe Gly Leu Leu Val Leu Tyr
                85   90   95
Ile Leu Leu Ala Ser Ser Trp Lys Arg Pro Glu Pro Gly Ile Leu Thr
                100   105   110
Asp Arg Gln Pro Leu Leu His Asp Gly Glu
            115   120

<210> 6285
<211> 2542
<212> DNA
<213> Homo sapiens

<400> 6285
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120

5469

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1740
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5470

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<211> 57
<212> PRT
<213> Homo sapiens

<400> 6286
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Ser Cys Gly Gln His Glu Gln Gln Ile Pro Pro Asp His His Lys Asp
            20   25   30
Ala Gly Asn Ile Tyr Leu Gly Thr Ser Pro Pro Ser Gln Glu Pro Ser
            35   40   45
Ser Pro Trp Ala Ser Trp His Arg Ser
    50   55

<210> 6287
<211> 1674
<212> DNA
<213> Homo sapiens

<400> 6287
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<210> 6288

<211> 269
<212> PRT
<213> Homo sapiens

<400> 6288
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Asp Val Lys Asn Phe Tyr Leu Met Thr Asn Gly Phe His Met Thr Trp
        35                  40                  45
Ser Val Lys Leu Asp Glu His Ile Ile Pro Leu Gly Ser Met Ala Ile
    50                  55                  60
Asn Ser Ile Ser Lys Leu Thr Gln Leu Thr Gln Ser Ser Met Tyr Ser
65                  70                  75                  80
Leu Pro Asn Ala Pro Thr Leu Ala Asp Leu Glu Asp Asp Thr His Glu
                85                  90                  95
Ala Ser Asp Asp Gln Pro Glu Lys Pro His Phe Asp Ser Arg Ser Val
            100                 105                 110
Ile Phe Glu Leu Asp Ser Cys Asn Gly Ser Gly Lys Val Cys Leu Val
        115                 120                 125
Tyr Lys Ser Gly Lys Pro Ala Leu Ala Glu Asp Thr Glu Ile Trp Phe
    130                 135                 140
Leu Asp Arg Ala Leu Tyr Trp His Phe Leu Thr Asp Thr Phe Thr Ala
145                 150                 155                 160
Tyr Tyr Arg Leu Leu Ile Thr His Leu Gly Leu Pro Gln Trp Gln Tyr
            165                 170                 175
Ala Phe Thr Ser Tyr Gly Ile Ser Pro Gln Ala Lys Gln Trp Phe Ser
            180                 185                 190
Met Tyr Lys Pro Ile Thr Tyr Asn Thr Asn Leu Leu Thr Glu Glu Thr
        195                 200                 205
Asp Ser Phe Val Asn Lys Leu Asp Pro Ser Lys Val Phe Lys Ser Lys
    210                 215                 220
Asn Lys Ile Val Ile Pro Lys Lys Lys Gly Pro Val Gln Pro Ala Gly
225                 230                 235                 240
Gly Gln Lys Gly Pro Ser Gly Pro Ser Gly Pro Ser Thr Ser Ser Thr
            245                 250                 255
Ser Lys Ser Ser Ser Gly Ser Gly Asn Pro Thr Arg Lys
            260                 265
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<210> 6289
<211> 1321
<212> DNA
<213> Homo sapiens

<400> 6289
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acactgcgtc cggggccaga cgacgatatc agcgcggggt ccccacaacg ccatggggca
60
gagccaactc tcgagcgcgt gatcgaagcc cgcagttttt tcgcccccgt cacttccggg
120
tgcgacaatc tcttctgtcc ggccagccgc tggagtcgtt aggtgccgcc ttgcttctga
180
cgagccacac gtttgcttct tccctgtgtt cccagctgga gggacatgag tgtccctggg
240
```

ccgtcgtctc cggacggggc cctgacacgg ccaccctact gcctggaggc cggggagccg
300
acgcctggtt taagtgacac ttctccagat gaagggttaa tagaggactt gactatagaa
360
gacaaagcag tggagcaact ggcagaagga ttgctttctc attatttgcc agatctgcag
420
agatcaaaac aagccctcca ggaactcaca cagaaccaag ttgtattgtt agacacactg
480
gaacaagaga tttcaaaatt taaagaatgt cattctatgt tggatattaa tgctttgttt
540
gctgaggcta aacactatca tgccaagttg gtgaatataa gaaaagagat gctgatgctt
600
catgaaaaaa catcaaagtt aaaaaaaaga gcacttaaac tgcagcagaa gaggcaaaaa
660
gaagagttgg aaagggagca gcaacgagag aaggggtttg aaagagaaaa gcagttaact
720
gccagaccag ccaaaaggat gtgaaaagtt gtgtttgtgt gttttcttct cctgtcccat
780
atttgggtta tgatgactca agtgtagact gaagttgagg tagtgcctta tgccattatg
840
tcatatgttg aaatccttat tccggtatta ctgtgtctcc atgccttttt tccaagtagc
900
agacgtcatg ttgcatggtt tttgatattt atatgtaagt ttttcaaatt ttgcttaatt
960
ttaaaattta ttattttgat cttgaattat ttataaactg gaaagtggtt tgattattgt
1020
gagtcaaaac tctaagtggt taaaaattag tatgaatttt ttagcttctt aatgaatatg
1080
gatttaaaac tctccagttc ttattttatg aaatgacttg cctttctggt aatacaatgc
1140
tgattttta gtaattgcct tttcattact ttgttaagaa gaaatgccag ctgtttaatc
1200
acacctaccc ctggaaaaga ggtaaacctt ttgaacagtt gaatttcatc agaagctcta
1260
tagctttttg gtgagaggaa gtgatactct ttattacaag aaacaaggaa ttaacaaaaa
1320
t
1321

<210> 6290
<211> 172
<212> PRT
<213> Homo sapiens

<400> 6290
Met Ser Val Pro Gly Pro Ser Ser Pro Asp Gly Ala Leu Thr Arg Pro
1   5   10   15
Pro Tyr Cys Leu Glu Ala Gly Glu Pro Thr Pro Gly Leu Ser Asp Thr
            20   25   30
Ser Pro Asp Glu Gly Leu Ile Glu Asp Leu Thr Ile Glu Asp Lys Ala
        35   40   45
Val Glu Gln Leu Ala Glu Gly Leu Leu Ser His Tyr Leu Pro Asp Leu
    50   55   60
Gln Arg Ser Lys Gln Ala Leu Gln Glu Leu Thr Gln Asn Gln Val Val

```
65                    70                    75                    80
Leu Leu Asp Thr Leu Glu Gln Glu Ile Ser Lys Phe Lys Glu Cys His
                      85                    90                    95
Ser Met Leu Asp Ile Asn Ala Leu Phe Ala Glu Ala Lys His Tyr His
                     100                   105                   110
Ala Lys Leu Val Asn Ile Arg Lys Glu Met Leu Met Leu His Glu Lys
                     115                   120                   125
Thr Ser Lys Leu Lys Lys Arg Ala Leu Lys Leu Gln Gln Lys Arg Gln
          130                   135                   140
Lys Glu Glu Leu Glu Arg Glu Gln Gln Arg Glu Lys Gly Phe Glu Arg
145                   150                   155                   160
Glu Lys Gln Leu Thr Ala Arg Pro Ala Lys Arg Met
                     165                   170
```

<210> 6291
<211> 2718
<212> DNA
<213> Homo sapiens

<400> 6291

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naggttgtct tggcgggggg cgtggcacct gcactgttcc gggggatgcc agctcacttc
60
tcggacagcg cccagactga ggcctgctac cacatgctga gccggcccca gccgccaccc
120
gacccctcc tgctccagcg tctgccacgg cccagctccc tgtcagacaa gacccagctc
180
cacagcaggt ggctggactc gtcgcggtgt ctcatgcagc agggcatcaa ggctggggac
240
gcactctggc tgcgcttcaa gtactacagc ttcttcgatt tggatcccaa gacagacccc
300
gtgcggctga cacagctgta tgagcaggcc cggtgggacc tgctgctgga ggagattgac
360
tgcaccgagg aggagatgat ggtgtttgcc gccctgcagt accacatcaa caagctgtcc
420
cagagcgggg aggtggggga gccggctggc acagacccag ggctggacga cctggatgtg
480
gccctgagca acctggaggt gaagctggag gggtcggcgc ccacagatgt gctggacagc
540
ctcaccacca tcccagagct caaggactat ctccgaatct ttcggccccg gaagctgacc
600
ctgaagggct accgccaaca ctgggtggtg ttcaaggaga ccacactgtc ctactacaag
660
agccaggacg aggcccctgg ggaccccatt cagcagctca acctcaaggg ctgtgaggtg
720
gttcccgatg ttaacgtctc cggccagaag ttctgcatta aactcctagt gccctcccct
780
gagggcatga gtgagatcta cctgcggtgc caggatgagc agcagtatgc ccgctggatg
840
gctggctgcc gcctggcctc caaaggccgc accatggccg acagcagcta caccagcgag
900
gtgcaggcca tcctggcctt cctcagcctg cagcacgggc agtggggggcc caggcaacca
960
cccccacggc ctgatgcctc tgccgagggc ctcaacccct acggcctcgt tgcccccgt
1020
```

```
ttccagcgaa agttcaaggc caagcagctc accccacgga tcctggaagc ccaccagaat
1080
gtggcccagt tgtcgctggc agaggcccag ctgcgcttca tccaggcctg gcagtccctg
1140
cccgacttcg gcatctccta tgtcatggtc aggttcaagg gcagcaggaa agacgagatc
1200
ctgggcatcg ccaacaaccg actgatccgc atcgacttgg ccgtgggtga cgtggtcaag
1260
acctggcgtt tcagcaacat gcgccagtgg aatgtcaact gggacatccg gcaggtggcc
1320
atcgagtttg atgaacacat caatgtggcc ttcagctgtg tgtctgccag ctgccgaatt
1380
gtacacgagt atatcggggg ctacattttc ctgtcgacgc gggagcgggc ccgtggggag
1440
gagctggatg aagacctctt cctgcagctc accggggggcc atgaggcctt ctgagggctg
1500
tctgattgcc cctgccctgc tcaccaccct gtcacagcca ctcccaagcc cacacccaca
1560
ggggctcact gccccacacc cgctccaggc aggcacccag ctgggcattt cacctgctgt
1620
cactgacttt gtgcaggcca aggacctggc agggccagac gctgtaccat cacccaggcc
1680
aggatgggg gtgggggtcc ctgagctcat gtggtgcccc ctttccttgt ctgagtggct
1740
gaggctgata cccctgacct atctgcagtc ccccagcaca caaggaagac cagatgtagc
1800
tacaggatga tgaaacatgg tttcaaacga gttctttctt gttacttttt aaaatttctt
1860
ttttataaat taatattta ttgttggatc ctcctccttt ctctggagct gtgcttgggg
1920
ctactctgac actctgtctc ttcatcacca gccaaggaaa ggggctttcg ggtagggcgt
1980
agctgcaggg cctccttgaa gtacttggga aggaggaagc catcagtatt ccctggagtc
2040
agaatcaccc cattggcaga gcggaagaag ggtattccat ctgccagagc caggggtcca
2100
tcgatgaaca cagctatttc acaatgggac cgcatgccac tgatgatacc ggggtctcca
2160
ggcagtcctg gggccaggtg aatgtgcgtc cttccctggc aggacaggcc tttgagtagg
2220
atggatggcc agtgcttcca gaatgtacca tggactagca tcgggggcag ggctgcggtg
2280
tctccagggg catcagctcc aacttaggta cctgcaggga atggccctgg ttggcccgga
2340
tgagaaggcc agtgctggga tcccccagct gcaggcgaa ccgctgcttc ctattggtgt
2400
ccaccacgcg ctgcacatct tcagcagaga agccgcggaa ctggggcaac tgcaggaggg
2460
tgcccagggg cacgaagcca tctgtgggca ggcagggtgc tcaggagcta accttgctct
2520
ggactgggcc agggttaaca gggagccaca ggcaaccgaa acaaagtctg ggcttggaga
2580
tcgcttgggc atcctctgtg ggacctttag aaagtctccc ctttctgggc cgcagttttc
2640
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5476

aacttacata aaaagaggat ctgcctcacg gaggggcagg gaggtgagtg cccagcatag
2700
cgctggcccg gagtgcac
2718

<210> 6292
<211> 497
<212> PRT
<213> Homo sapiens

<400> 6292
Xaa Val Val Leu Ala Gly Gly Val Ala Pro Ala Leu Phe Arg Gly Met
1   5   10   15
Pro Ala His Phe Ser Asp Ser Ala Gln Thr Glu Ala Cys Tyr His Met
            20   25   30
Leu Ser Arg Pro Gln Pro Pro Asp Pro Leu Leu Leu Gln Arg Leu
        35   40   45
Pro Arg Pro Ser Ser Leu Ser Asp Lys Thr Gln Leu His Ser Arg Trp
    50   55   60
Leu Asp Ser Ser Arg Cys Leu Met Gln Gln Gly Ile Lys Ala Gly Asp
65   70   75   80
Ala Leu Trp Leu Arg Phe Lys Tyr Tyr Ser Phe Phe Asp Leu Asp Pro
                85   90   95
Lys Thr Asp Pro Val Arg Leu Thr Gln Leu Tyr Glu Gln Ala Arg Trp
            100   105   110
Asp Leu Leu Leu Glu Glu Ile Asp Cys Thr Glu Glu Glu Met Met Val
            115   120   125
Phe Ala Ala Leu Gln Tyr His Ile Asn Lys Leu Ser Gln Ser Gly Glu
        130   135   140
Val Gly Glu Pro Ala Gly Thr Asp Pro Gly Leu Asp Asp Leu Asp Val
145   150   155   160
Ala Leu Ser Asn Leu Glu Val Lys Leu Glu Gly Ser Ala Pro Thr Asp
                165   170   175
Val Leu Asp Ser Leu Thr Thr Ile Pro Glu Leu Lys Asp Tyr Leu Arg
            180   185   190
Ile Phe Arg Pro Arg Lys Leu Thr Leu Lys Gly Tyr Arg Gln His Trp
        195   200   205
Val Val Phe Lys Glu Thr Thr Leu Ser Tyr Tyr Lys Ser Gln Asp Glu
    210   215   220
Ala Pro Gly Asp Pro Ile Gln Gln Leu Asn Leu Lys Gly Cys Glu Val
225   230   235   240
Val Pro Asp Val Asn Val Ser Gly Gln Lys Phe Cys Ile Lys Leu Leu
                245   250   255
Val Pro Ser Pro Glu Gly Met Ser Glu Ile Tyr Leu Arg Cys Gln Asp
            260   265   270
Glu Gln Gln Tyr Ala Arg Trp Met Ala Gly Cys Arg Leu Ala Ser Lys
        275   280   285
Gly Arg Thr Met Ala Asp Ser Ser Tyr Thr Ser Glu Val Gln Ala Ile
        290   295   300
Leu Ala Phe Leu Ser Leu Gln His Gly Gln Trp Gly Pro Arg Gln Pro
305   310   315   320
Pro Pro Arg Pro Asp Ala Ser Ala Glu Gly Leu Asn Pro Tyr Gly Leu
                325   330   335
Val Ala Pro Arg Phe Gln Arg Lys Phe Lys Ala Lys Gln Leu Thr Pro

```
              340                   345                   350
Arg Ile Leu Glu Ala His Gln Asn Val Ala Gln Leu Ser Leu Ala Glu
          355                   360                   365
Ala Gln Leu Arg Phe Ile Gln Ala Trp Gln Ser Leu Pro Asp Phe Gly
      370                   375                   380
Ile Ser Tyr Val Met Val Arg Phe Lys Gly Ser Arg Lys Asp Glu Ile
385                   390                   395                   400
Leu Gly Ile Ala Asn Asn Arg Leu Ile Arg Ile Asp Leu Ala Val Gly
              405                   410                   415
Asp Val Val Lys Thr Trp Arg Phe Ser Asn Met Arg Gln Trp Asn Val
          420                   425                   430
Asn Trp Asp Ile Arg Gln Val Ala Ile Glu Phe Asp Glu His Ile Asn
          435                   440                   445
Val Ala Phe Ser Cys Val Ser Ala Ser Cys Arg Ile Val His Glu Tyr
      450                   455                   460
Ile Gly Gly Tyr Ile Phe Leu Ser Thr Arg Glu Arg Ala Arg Gly Glu
465                   470                   475                   480
Glu Leu Asp Glu Asp Leu Phe Leu Gln Leu Thr Gly Gly His Glu Ala
              485                   490                   495
Phe
```

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<210> 6293
<211> 750
<212> DNA
<213> Homo sapiens

<400> 6293
nggccgggcg ccatggcacc gtggggcaag cggctggctg gcgtgcgcgg ggtgctgctt
60
gacatctcgg gcgtgctgta cgacagcggc gcgtgcggcg gcacggccat cgccggctcg
120
gtggaggcgg tggccagact gaagcgttcc cggctgaagg tgaggttctg caccaacgag
180
tcgcagaagt cccgggcaga gctggtgggg cagcttcaga ggctgggatt tgacatctct
240
gagcaggagg taaccgcccc ggcaccagct gcctgccaga tcctgaagga gcgaggcctg
300
cgaccatacc tgctcatcca tgacggagtc cgctcagaat ttgatcagat cgacacatcc
360
aacccaaact gtgtggtaat tgcagacgca ggagaaagct ttcttatca aaacatgaat
420
aacgccttcc aggtgctcat ggagctggaa aaacctgtgc tcatatcact gggaaaaggg
480
cgttactaca aggagacctc tggcctgatg ctggacgttg gtccctacat gaaggcgctt
540
gagtatgcct gtggcatcaa agccgaggtg gtggggaagc cttctcctga gtttttcaag
600
tctgccctgc aagcgatagg agtggaagcc caccaggccg tcatgattgg ggacgatatc
660
gtgggcgacg tcggcggtgc ccagcggtgt ggaatgagag cgctgcaggt gcgcaccggg
720
aagttcaggc ccagtgacga gcaccatccg
750
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<210> 6294
<211> 250
<212> PRT
<213> Homo sapiens

<400> 6294

```
Xaa Pro Gly Ala Met Ala Pro Trp Gly Lys Arg Leu Ala Gly Val Arg
1               5                   10                  15
Gly Val Leu Leu Asp Ile Ser Gly Val Leu Tyr Asp Ser Gly Ala Cys
            20                  25                  30
Gly Gly Thr Ala Ile Ala Gly Ser Val Glu Ala Val Ala Arg Leu Lys
        35                  40                  45
Arg Ser Arg Leu Lys Val Arg Phe Cys Thr Asn Glu Ser Gln Lys Ser
        50                  55                  60
Arg Ala Glu Leu Val Gly Gln Leu Gln Arg Leu Gly Phe Asp Ile Ser
65                  70                  75                  80
Glu Gln Glu Val Thr Ala Pro Ala Pro Ala Ala Cys Gln Ile Leu Lys
                85                  90                  95
Glu Arg Gly Leu Arg Pro Tyr Leu Leu Ile His Asp Gly Val Arg Ser
            100                 105                 110
Glu Phe Asp Gln Ile Asp Thr Ser Asn Pro Asn Cys Val Val Ile Ala
        115                 120                 125
Asp Ala Gly Glu Ser Phe Ser Tyr Gln Asn Met Asn Asn Ala Phe Gln
    130                 135                 140
Val Leu Met Glu Leu Glu Lys Pro Val Leu Ile Ser Leu Gly Lys Gly
145                 150                 155                 160
Arg Tyr Tyr Lys Glu Thr Ser Gly Leu Met Leu Asp Val Gly Pro Tyr
                165                 170                 175
Met Lys Ala Leu Glu Tyr Ala Cys Gly Ile Lys Ala Glu Val Val Gly
            180                 185                 190
Lys Pro Ser Pro Glu Phe Phe Lys Ser Ala Leu Gln Ala Ile Gly Val
            195                 200                 205
Glu Ala His Gln Ala Val Met Ile Gly Asp Asp Ile Val Gly Asp Val
    210                 215                 220
Gly Gly Ala Gln Arg Cys Gly Met Arg Ala Leu Gln Val Arg Thr Gly
225                 230                 235                 240
Lys Phe Arg Pro Ser Asp Glu His His Pro
                245                 250
```

<210> 6295
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6295

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ggcgccgggg gcgggggtgg gaggcggagg cggggccggg gcgccgcggg cggggcgccg
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ggggcggggc gagtccggag gactcctcgg actgcgcgga acatggcgtt ctggggttgg
120
cgcgccgcgg cagccctccg gctgtggggc cgggtagttg aacgggtcga ggccggggga
180
ggcgtggggc cgtttcaggc ctgcggctgt cggctggtgc ttggcggcag ggacgatgtg
240
```

```
agtgcgggggc tgagaggcag ccatggggcc cgcggtgagc ccttggacccc ggcgcgcccc
300

ttgcagaggc ctcccagacc cgaggtgccc agggcattcc ggaggcagcc gagggcagca
360

gctcccagtt tcttcttttc gagtattaaa ggtggaagaa ggtccatatc tttttctgtg
420

ggtgcttcaa gtgttgttgg aagtggaggc agcagtgaca aggggaagct ttccctgcag
480

gatgtagctg agctgattcg ggccagagcc tgccagaggg tggtggtcat ggtgggggcc
540

ggcatcagca cacccagtgg cattccagac ttcagatcgc cggggagtgg cctgtacagc
600

aacctccagc agtacgatct cccgtacccc gaggccattt ttgaactccc attcttcttt
660

cacaacccca agcccttttt cactttggcc aaggagctgt accctggaaa ctacaagccc
720

aacgtcactc actactttct ccggctgctt catgacaagg ggctgcttct gcggctctac
780

acgcagaaca tcgatgggct tgagagagtg tcgggcatcc ctgcctcaaa gctggttgaa
840

gctcatggaa cctttgcctc tgccacctgc acagtctgcc aaagacccttt cccaggggag
900

gacattcggg ctgacgtgat ggcagacagg gttccccgct gcccggtctg caccggcgtt
960

gtgaagcccg acattgtgtt ctttggggag ccgctgcccc agaggttctt gctgcatgtg
1020

gttgatttcc ccatggcaga tctgctgctc atccttggga cctccctgga ggtggagcct
1080

tttgccagct tgaccgaggc cgtgcggagc tcagttcccc gactgctcat caaccgggac
1140

ttggtggggc ccttggcttg gcatcctcgc agcagggacg tggcccagct gggggacgtg
1200

gttcacggcg tggaaagcct agtggagctt ctgggctgga cagaagagat gcgggaccttt
1260

gtgcagcggg aaactgggaa gcttgatgga ccagacaaat aggatgatgg cttgaccgag
1320

gccgtgcgga cgtcagttcc ccgactgctc atcaaccggg acttggtggg gcccttggct
1380

tggcatcctc gcagcaggga cgtggcccag ctgggggacg tggttcacgg cgtggaaagc
1440

ctagtggagc ttctgggctg gacagaagag atgcgggacc ttgtgcagcg ggaaactggg
1500

aagcttgatg gaccagacaa ataggatgat ggctgccccc acacaataaa tggtaacata
1560

ggagacatcc acatcccaat tctgacaaga cctcatgcct gaagacagct tgggcaggtg
1620

aaaccagaat atgtgaactg agtggacacc cgaggctgcc actggaatgt cttctcaggc
1680

catgagctgc agtgactggt agggctgtgt ttacagtcag ggccaccccg tcacatatac
1740

aaaggagctg cctgcctgtt tgctgtgttg aactcttcac tctgctgaag ctcctaatgg
1800

aaaaagcttt cttctgactg tgaccctctt gaactgaatc agaccaactg gaatcccaga
1860
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ccgagtctgc tttctgtgcc tagttgaacg gcaagctcgg catctgttgg ttacaagatc
1920
cagacttggg ccgagcggtc cccagccctc ttcatgttcc gaagtgtagt cttgaggccc
1980
tggtgccgca cttctagcat gttggtctcc tttagtgggg ctatttttaa tgagagaaaa
2040
tctgttcttt ccagcatgaa atacatttag tctcctcaaa aaaaaaaaac a
2091

<210> 6296
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6296

```
Met Ala Phe Trp Gly Trp Arg Ala Ala Ala Ala Leu Arg Leu Trp Gly
1               5                   10                  15
Arg Val Val Glu Arg Val Glu Ala Gly Gly Gly Val Gly Pro Phe Gln
            20                  25                  30
Ala Cys Gly Cys Arg Leu Val Leu Gly Gly Arg Asp Asp Val Ser Ala
            35                  40                  45
Gly Leu Arg Gly Ser His Gly Ala Arg Gly Glu Pro Leu Asp Pro Ala
        50                  55                  60
Arg Pro Leu Gln Arg Pro Pro Arg Pro Glu Val Pro Arg Ala Phe Arg
65                  70                  75                  80
Arg Gln Pro Arg Ala Ala Ala Pro Ser Phe Phe Phe Ser Ser Ile Lys
                85                  90                  95
Gly Gly Arg Arg Ser Ile Ser Phe Ser Val Gly Ala Ser Ser Val Val
                100                 105                 110
Gly Ser Gly Gly Ser Ser Asp Lys Gly Lys Leu Ser Leu Gln Asp Val
            115                 120                 125
Ala Glu Leu Ile Arg Ala Arg Ala Cys Gln Arg Val Val Val Met Val
        130                 135                 140
Gly Ala Gly Ile Ser Thr Pro Ser Gly Ile Pro Asp Phe Arg Ser Pro
145                 150                 155                 160
Gly Ser Gly Leu Tyr Ser Asn Leu Gln Gln Tyr Asp Leu Pro Tyr Pro
                165                 170                 175
Glu Ala Ile Phe Glu Leu Pro Phe Phe Phe His Asn Pro Lys Pro Phe
                180                 185                 190
Phe Thr Leu Ala Lys Glu Leu Tyr Pro Gly Asn Tyr Lys Pro Asn Val
        195                 200                 205
Thr His Tyr Phe Leu Arg Leu Leu His Asp Lys Gly Leu Leu Leu Arg
    210                 215                 220
Leu Tyr Thr Gln Asn Ile Asp Gly Leu Glu Arg Val Ser Gly Ile Pro
225                 230                 235                 240
Ala Ser Lys Leu Val Glu Ala His Gly Thr Phe Ala Ser Ala Thr Cys
                245                 250                 255
Thr Val Cys Gln Arg Pro Phe Pro Gly Glu Asp Ile Arg Ala Asp Val
                260                 265                 270
Met Ala Asp Arg Val Pro Arg Cys Pro Val Cys Thr Gly Val Val Lys
        275                 280                 285
Pro Asp Ile Val Phe Phe Gly Glu Pro Leu Pro Gln Arg Phe Leu Leu
        290                 295                 300
His Val Val Asp Phe Pro Met Ala Asp Leu Leu Leu Ile Leu Gly Thr
```

5481

```
     305                        310                    315                   320
Ser Leu Glu Val Glu Pro Phe Ala Ser Leu Thr Glu Ala Val Arg Ser
                     325                        330                   335
Ser Val Pro Arg Leu Leu Ile Asn Arg Asp Leu Val Gly Pro Leu Ala
             340                        345                   350
Trp His Pro Arg Ser Arg Asp Val Ala Gln Leu Gly Asp Val Val His
         355                        360                   365
Gly Val Glu Ser Leu Val Glu Leu Leu Gly Trp Thr Glu Glu Met Arg
     370                        375                   380
Asp Leu Val Gln Arg Glu Thr Gly Lys Leu Asp Gly Pro Asp Lys
385                        390                   395
```

```
<210> 6297
<211> 472
<212> DNA
<213> Homo sapiens
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```
<400> 6297
nggggccgct ggccgagagg ctgaggcggc gtcatgtcct ccgaggtgtc cgcgcgccgc
60
gacgccaaga agctggtgcg ctccccgagc ggcctgcgca tggtgcccga acaccgcgcc
120
ttcggaagcc cgttcggcct ggaggagccg cagtgggtcc cggacaagga gtgtcggaga
180
tgtatgcagt gtgacgccaa gtttgacttt ctcaccagaa agcaccactg tcgccgctgc
240
gggaagtgct ctgcgacag gtgctgcagc cagaaggtgc cgctgcggcg catgtgcttt
300
gtggaccccg tgcggcagtg cgcggagtgc gccctggtgt ccctcaagga ggcggagttc
360
tacgacaagc agctcaaagt gctcctgagc ggtaaggacg ggtgtcctgc acagtcctgc
420
gcgctccgcc agccggctcc tcgtgtctgt ggcgatgctg tgggctgtgc ac
472
```

```
<210> 6298
<211> 146
<212> PRT
<213> Homo sapiens
```

```
<400> 6298
Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
1                   5                       10                  15
Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
                20                      25                  30
Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
            35                      40                  45
Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
        50                      55                  60
His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65                      70                      75                  80
Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
                    85                      90                  95
Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
```

```
              100                105                110
Gln Leu Lys Val Leu Leu Ser Gly Lys Asp Gly Cys Pro Ala Gln Ser
       115                120                125
Cys Ala Leu Arg Gln Pro Ala Pro Arg Val Cys Gly Asp Ala Val Gly
   130                135                140
Cys Ala
145
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<210> 6299
<211> 1466
<212> DNA
<213> Homo sapiens

<400> 6299
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360
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420
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480
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gaccatgaag aggagcccca gctctccgag ccctaccttt ctaaacaaaa gaagctcatg
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1200
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1320
gctaaaagag agagaaggaa cgagagagag agagaaaaaa caaaaaacca gaaaaccacg
1380
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1466

<210> 6300
<211> 372
<212> PRT
<213> Homo sapiens

<400> 6300
Leu Ile Pro Gly Cys His Gly Asp Pro Gln Gln Ser Asp Pro His Gln
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Leu Gln Leu Val Ala His Leu Arg Ala Gly Glu Arg Cys Gly Gln Ala
            20   25   30
Ser Gly Gly Pro Arg Arg Ser Arg Gly Gly Gln Pro Ala His Trp Pro
            35   40   45
Arg Glu Ser Leu Val Leu Tyr His Trp Thr Gln Ser Phe Ser Ser Gln
        50   55   60
Lys Val Arg Leu Val Ile Ala Glu Lys Gly Leu Val Cys Glu Glu Arg
65   70   75   80
Asp Val Ser Leu Pro Gln Ser Glu His Lys Glu Pro Trp Phe Met Arg
                85   90   95
Leu Asn Leu Gly Glu Glu Val Pro Val Ile Ile His Arg Asp Asn Ile
            100   105   110
Ile Ser Asp Tyr Asp Gln Ile Ile Asp Tyr Val Glu Arg Thr Phe Thr
            115   120   125
Gly Glu His Val Val Ala Leu Met Pro Glu Val Gly Ser Leu Gln His
        130   135   140
Ala Arg Val Leu Gln Tyr Arg Glu Leu Leu Asp Ala Leu Pro Met Asp
145   150   155   160
Ala Tyr Thr His Gly Cys Ile Leu His Pro Glu Leu Thr Thr Asp Ser
                165   170   175
Met Ile Pro Lys Tyr Ala Thr Ala Glu Ile Arg Arg His Leu Ala Asn
            180   185   190
Ala Thr Thr Asp Leu Met Lys Leu Asp His Glu Glu Glu Pro Gln Leu
            195   200   205
Ser Glu Pro Tyr Leu Ser Lys Gln Lys Lys Leu Met Ala Lys Ile Leu
        210   215   220
Glu His Asp Asp Val Ser Tyr Leu Lys Lys Ile Leu Gly Glu Leu Ala
225   230   235   240
Met Val Leu Asp Gln Ile Glu Ala Glu Leu Glu Lys Arg Lys Leu Glu
                245   250   255
Asn Glu Gly Gln Lys Cys Glu Leu Trp Leu Cys Gly Cys Ala Phe Thr
            260   265   270
Leu Ala Asp Val Leu Leu Gly Ala Thr Leu His Arg Leu Lys Phe Leu
            275   280   285
Gly Leu Ser Lys Lys Tyr Trp Glu Asp Gly Ser Arg Pro Asn Leu Gln

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        290                    295                    300
Ser Phe Phe Glu Arg Val Gln Arg Arg Phe Ala Phe Arg Lys Val Leu
305                    310                    315                    320
Gly Asp Ile His Thr Thr Leu Leu Ser Ala Val Ile Pro Asn Ala Phe
                325                    330                    335
Arg Leu Val Lys Arg Lys Pro Pro Ser Phe Phe Gly Ala Ser Phe Leu
            340                    345                    350
Met Gly Ser Leu Gly Gly Met Gly Tyr Phe Ala Tyr Trp Tyr Leu Lys
        355                    360                    365
Lys Lys Tyr Ile
        370
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<210> 6301
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6301

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120
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180
cgccacagca gtggaagcct tactccccccc gtgaccccac ccatcacccc ctcctcttca
240
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300
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360
tccatgtgca tgaatggagg ggaagagaag ccttttgcct gcccagttcc tggatgtaaa
420
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480
attcgtgtcc gcaaaccatt caagtgtcgc tgtgggaaga gttacaagac agctcagggc
540
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600
cagcaataac atgctggtca taactgtgcc aagaaatcct caccagcagt tgctgatttt
660
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720
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780
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900
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911
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<210> 6302
<211> 202
<212> PRT

<213> Homo sapiens

<400> 6302
Xaa Arg Val Leu Glu Lys Gln Glu Leu Gln Gln Pro Thr Tyr Val Ala
1   5   10   15
Leu Ser Tyr Ile Asn Arg Phe Met Thr Asp Ala Ala Arg Arg Glu Gln
            20   25   30
Glu Ser Leu Lys Lys Lys Ile Gln Pro Lys Leu Ser Leu Thr Leu Ser
        35   40   45
Ser Ser Val Ser Arg Gly Asn Val Ser Thr Pro Pro Arg His Ser Ser
    50   55   60
Gly Ser Leu Thr Pro Pro Val Thr Pro Pro Ile Thr Pro Ser Ser Ser
65   70   75   80
Phe Arg Ser Ser Thr Pro Thr Gly Ser Glu Tyr Asp Glu Glu Glu Val
                85   90   95
Asp Tyr Glu Glu Ser Asp Ser Asp Glu Ser Trp Thr Thr Glu Ser Ala
            100   105   110
Ile Ser Ser Glu Ala Ile Leu Ser Ser Met Cys Met Asn Gly Gly Glu
            115   120   125
Glu Lys Pro Phe Ala Cys Pro Val Pro Gly Cys Lys Lys Arg Tyr Lys
    130   135   140
Asn Val Asn Gly Ile Lys Tyr His Ala Lys Asn Gly His Arg Thr Gln
145   150   155   160
Ile Arg Val Arg Lys Pro Phe Lys Cys Arg Cys Gly Lys Ser Tyr Lys
                165   170   175
Thr Ala Gln Gly Leu Arg His His Thr Ile Asn Phe His Pro Pro Val
            180   185   190
Ser Ala Glu Ile Ile Arg Lys Met Gln Gln
        195   200

<210> 6303
<211> 676
<212> DNA
<213> Homo sapiens

<400> 6303
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120
gctgaaacaa tgagaatagt gctggaacgc tgctacaatg atttgcgtct tctcagtgtc
180
tccagtaaaa ccctgaaagc tgaaggattt tttagaagta caaggtgtt tgttgaaagc
240
tccgagactt tggattacca gatggccttt gcagactctc atttatggaa actcctggat
300
cggcatgcaa atacaatcag attatttgtt ttgctacctg aacaatcccc agtatcttat
360
tccaaaagga cagcatacca gaaagctgga ggcgattctg gtaatgtgga tgatgactgt
420
gaaagagtca aaggacctgt aggaagccta aagtctgtgg aagctattct agaagaaagc
480
actgaaaaac tcaaaagctt gtcactgcag caacagcagg atggagataa tggggacagc
540

                              5486

agcaaaagta ctgagacaag tgactttgaa aacatcgaat cacctctcaa tgagagggac
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tcttcagcat cagtggataa tagagaactt gaacagcata ttcagacttc tgatccagaa
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676

<210> 6304
<211> 181
<212> PRT
<213> Homo sapiens

<400> 6304
Met Arg Ile Val Leu Glu Arg Cys Tyr Asn Asp Leu Arg Leu Leu Ser
 1   5   10   15
Val Ser Ser Lys Thr Leu Lys Ala Glu Gly Phe Phe Arg Ser Asn Lys
                20   25   30
Val Phe Val Glu Ser Ser Glu Thr Leu Asp Tyr Gln Met Ala Phe Ala
            35   40   45
Asp Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg
        50   55   60
Leu Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg
65   70   75   80
Thr Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp
                85   90   95
Cys Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Val Glu Ala
            100   105   110
Ile Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln
        115   120   125
Gln Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser
        130   135   140
Asp Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala
145   150   155   160
Ser Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro
                165   170   175
Glu Lys Phe Ser Val
                180

<210> 6305
<211> 3853
<212> DNA
<213> Homo sapiens

<400> 6305
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120
aaattccggc atgtgttcgg gcagccggtc aagaacgacc agtgctatga ggacattcgc
180
gtgtcccgtg ttacctggga cagcaccttc tgcgccgtca accccaagtt cctggcggtg
240
attgtggagg ccagtggagg gggtgccttt ctggtgctcc ccctaagcaa gacgggccgc
300

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attgacaagg cctaccctac agtatgtggg cacacaggac cagtgctgga catcgactgg
360
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420
cagatcccag aaaatggact cacctccccg ctgacagagc cggtggtggt actggagggg
480
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1920
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5488

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3540
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3853

<210> 6306
<211> 474
<212> PRT
<213> Homo sapiens

<400> 6306
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Pro Val Lys Asn Asp Gln Cys Tyr Glu Asp Ile Arg Val Ser Arg Val
            20   25   30
Thr Trp Asp Ser Thr Phe Cys Ala Val Asn Pro Lys Phe Leu Ala Val
            35   40   45
Ile Val Glu Ala Ser Gly Gly Gly Ala Phe Leu Val Leu Pro Leu Ser
        50   55   60
Lys Thr Gly Arg Ile Asp Lys Ala Tyr Pro Thr Val Cys Gly His Thr
65   70   75   80
Gly Pro Val Leu Asp Ile Asp Trp Cys Pro His Asn Asp Gln Val Ile
                85   90   95
Ala Ser Gly Ser Glu Asp Cys Thr Val Met Val Trp Gln Ile Pro Glu
            100   105   110
Asn Gly Leu Thr Ser Pro Leu Thr Glu Pro Val Val Val Leu Glu Gly
            115   120   125
His Thr Lys Arg Val Gly Ile Ile Ala Trp His Pro Thr Ala Arg Asn
        130   135   140
Val Leu Leu Ser Ala Gly Cys Asp Asn Val Val Leu Ile Trp Asn Val
145   150   155   160
Gly Thr Ala Glu Glu Leu Tyr Arg Leu Asp Ser Leu His Pro Asp Leu
            165   170   175
Ile Tyr Asn Val Ser Trp Asn His Asn Gly Ser Leu Phe Cys Ser Ala
            180   185   190
Cys Lys Asp Lys Ser Val Arg Ile Ile Asp Pro Arg Arg Gly Thr Leu
        195   200   205
Val Ala Glu Arg Glu Lys Ala His Glu Gly Ala Arg Pro Met Arg Ala
        210   215   220
Ile Phe Leu Ala Asp Gly Lys Val Phe Thr Thr Gly Phe Ser Arg Met
225   230   235   240
Ser Glu Arg Gln Leu Ala Leu Trp Asn Pro Lys Asn Met Gln Glu Pro
            245   250   255
Ile Ala Leu His Glu Met Asp Thr Ser Asn Gly Val Leu Leu Pro Phe
            260   265   270
Tyr Asp Pro Asp Thr Ser Ile Ile Tyr Leu Cys Gly Lys Gly Asp Ser

5490

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                 275                    280                    285
Ser Ile Arg Tyr Phe Glu Ile Thr Asp Glu Ser Pro Tyr Val His Tyr
        290                    295                    300
Leu Asn Thr Phe Ser Ser Lys Glu Pro Gln Arg Gly Met Gly Tyr Met
305                    310                    315                    320
Pro Lys Arg Gly Leu Asp Val Asn Lys Cys Glu Ile Ala Arg Phe Phe
                 325                    330                    335
Lys Leu His Glu Arg Lys Cys Glu Pro Ile Ile Met Thr Val Pro Arg
             340                    345                    350
Lys Ser Asp Leu Phe Gln Asp Asp Leu Tyr Pro Asp Thr Ala Gly Pro
         355                    360                    365
Glu Ala Ala Leu Glu Ala Glu Glu Trp Phe Glu Gly Lys Asn Ala Asp
    370                    375                    380
Pro Ile Leu Ile Ser Leu Lys His Gly Tyr Ile Pro Gly Lys Asn Arg
385                    390                    395                    400
Asp Leu Lys Val Val Lys Lys Asn Ile Leu Asp Ser Lys Pro Thr Ala
                 405                    410                    415
Asn Lys Lys Cys Asp Leu Ile Ser Ile Pro Lys Lys Thr Thr Asp Thr
             420                    425                    430
Ala Ser Val Gln Asn Glu Ala Lys Leu Asp Glu Ile Leu Lys Glu Ile
         435                    440                    445
Lys Ser Ile Lys Asp Thr Ile Cys Asn Gln Asp Glu Arg Ile Ser Lys
    450                    455                    460
Leu Glu Gln Gln Met Ala Lys Ile Ala Ala
465                    470
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<210> 6307
<211> 2119
<212> DNA
<213> Homo sapiens

<400> 6307
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120
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360
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420
atgaaacgaa gccctgaaga gaagcaagag atgcttcaaa ctgaaggcag ccagtgtgct
480
aaaacattta taaatctgat gactcatatc tgcaaagaac agaccgttca gtatatacta
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600
gcaagatgta gcaagaacac tgcgtggccc tactttctgc caatgttgaa tcgccaggat
660
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720

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780

cagaaactgc gtggtagcgg tgttgctgtt gaaacaggaa cagtctcttc aagtgatagt
840

tcgcagtatg tgcagtgcgt ggccgggtgt ttgcagctga tgctccgggt caatgagtac
900

cgctttgctt gggtggaagc agatggggta aattgcataa tgggagtgtt gagtaacaag
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tgtggctttc agctccagta tcaaatgatt ttttcaatat ggctcctggc attcagtcct
1020

caaatgtgtg aacacctgcg gcgctataat atcattccag ttctgtctga tatccttcag
1080

gagtctgtca aagagaaagt aacaagaatc attcttgcag catttcgtaa ctttttagaa
1140

aaatcaactg aaagagaaac tcgccaagaa tatgccctgg ctatgattca gtgcaaagtt
1200

ctgaaacagt tggagaactt ggaacagcag aagtacgatg atgaagatat cagcgaagat
1260

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1320

tacagttcag aacttaaatc tggaaggttg gaatggagtc ctgtgcacaa atctgagaaa
1380

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1440

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cagctggtca tgaaccacat gcatcatgaa gaccagcagg tccgctataa tgctctgctg
1620

gccgtgcaga agctcatggt gcacaactgg gaataccttg gcaagcagct ccagtccgag
1680

cagccccaga ccgctgccgc ccgaagctaa gcctgcctct ggccttcccc tccgcctcaa
1740

tgcagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg tttgatttta
1800

cttggaattt cctctgttat atagcttttc ccaatgctaa tttccaaaca acaacaacaa
1860

aataacatgt ttgcctgtta agttgtataa aagtaggtga ttctgtattt aaagaaaata
1920

ttactgttac atatactgct tgcaatttct gtatttattg ttctctggaa ataaatatag
1980

ttattaaagg attctcactc caaacatggc ctctctcttt acttggactt tgaacaaaag
2040

tcaactgttg tctcttttca aaccaaattg ggagaattgt tgcaaagtag tgaatggcaa
2100

ataaatgttt taaaatcta
2119

<210> 6308
<211> 483
<212> PRT

<213> Homo sapiens

<400> 6308
Met Thr Lys Met Asp Ile Arg Gly Ala Val Asp Ala Ala Val Pro Thr
1   5   10   15
Asn Ile Ile Ala Ala Lys Ala Ala Glu Val Arg Ala Asn Lys Val Asn
            20   25   30
Trp Gln Ser Tyr Leu Gln Gly Gln Met Ile Ser Ala Glu Asp Cys Glu
        35   40   45
Phe Ile Gln Arg Phe Glu Met Lys Arg Ser Pro Glu Glu Lys Gln Glu
    50   55   60
Met Leu Gln Thr Glu Gly Ser Gln Cys Ala Lys Thr Phe Ile Asn Leu
65   70   75   80
Met Thr His Ile Cys Lys Glu Gln Thr Val Gln Tyr Ile Leu Thr Met
                85   90   95
Val Asp Asp Met Leu Gln Glu Asn His Gln Arg Val Ser Ile Phe Phe
                100   105   110
Asp Tyr Ala Arg Cys Ser Lys Asn Thr Ala Trp Pro Tyr Phe Leu Pro
        115   120   125
Met Leu Asn Arg Gln Asp Pro Phe Thr Val His Met Ala Ala Arg Ile
    130   135   140
Ile Ala Lys Leu Ala Ala Trp Gly Lys Glu Leu Met Glu Gly Ser Asp
145   150   155   160
Leu Asn Tyr Tyr Phe Asn Trp Ile Lys Thr Gln Leu Ser Ser Gln Lys
            165   170   175
Leu Arg Gly Ser Gly Val Ala Val Glu Thr Gly Thr Val Ser Ser Ser
            180   185   190
Asp Ser Ser Gln Tyr Val Gln Cys Val Ala Gly Cys Leu Gln Leu Met
        195   200   205
Leu Arg Val Asn Glu Tyr Arg Phe Ala Trp Val Glu Ala Asp Gly Val
    210   215   220
Asn Cys Ile Met Gly Val Leu Ser Asn Lys Cys Gly Phe Gln Leu Gln
225   230   235   240
Tyr Gln Met Ile Phe Ser Ile Trp Leu Leu Ala Phe Ser Pro Gln Met
            245   250   255
Cys Glu His Leu Arg Arg Tyr Asn Ile Ile Pro Val Leu Ser Asp Ile
        260   265   270
Leu Gln Glu Ser Val Lys Glu Lys Val Thr Arg Ile Ile Leu Ala Ala
    275   280   285
Phe Arg Asn Phe Leu Glu Lys Ser Thr Glu Arg Glu Thr Arg Gln Glu
    290   295   300
Tyr Ala Leu Ala Met Ile Gln Cys Lys Val Leu Lys Gln Leu Glu Asn
305   310   315   320
Leu Glu Gln Gln Lys Tyr Asp Asp Glu Asp Ile Ser Glu Asp Ile Lys
            325   330   335
Phe Leu Leu Glu Lys Leu Gly Glu Ser Val Gln Asp Leu Ser Ser Phe
            340   345   350
Asp Glu Tyr Ser Ser Glu Leu Lys Ser Gly Arg Leu Glu Trp Ser Pro
        355   360   365
Val His Lys Ser Glu Lys Phe Trp Arg Glu Asn Ala Val Arg Leu Asn
    370   375   380
Glu Lys Asn Tyr Glu Leu Leu Lys Ile Leu Thr Lys Leu Leu Glu Val
385   390   395   400
Ser Asp Asp Pro Gln Val Leu Ala Val Ala Ala His Asp Val Gly Glu

```
                       405                      410                      415
    Tyr Val Arg His Tyr Pro Arg Gly Lys Arg Val Ile Glu Gln Leu Gly
                420                      425                      430
    Gly Lys Gln Leu Val Met Asn His Met His His Glu Asp Gln Gln Val
                435                      440                      445
    Arg Tyr Asn Ala Leu Leu Ala Val Gln Lys Leu Met Val His Asn Trp
                450                    455                      460
    Glu Tyr Leu Gly Lys Gln Leu Gln Ser Glu Gln Pro Gln Thr Ala Ala
    465                    470                      475                      480
    Ala Arg Ser
```

<210> 6309
<211> 564
<212> DNA
<213> Homo sapiens

<400> 6309

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cggccgcagc gttcacggtg acatcgcaaa aggcgagggg gagacgcgcc cgcgggaccc
60
cttcccggtg tgctcccacg tggcgtcgac cgggaagaag gggccggtag ggagcccttc
120
ccaggcgcct cccacggggt tcccccgcag ccgcgacacc accaacagtc gccgcaaccg
180
ccgcgtggaa cagacgaccc gggtctcaaa gaggcggcgc gggcgggacg cagcccctgg
240
tccatctcgg gcgccgcctg atgcactcct actgcgcccg ggtcctcccg gcctgtctca
300
ctttgggggg ctcagggtcc tcacggggga cgcctgcacg taagccagga cggcgttctg
360
caggaagctc gccctctggg cctcctcgtc ccggatgcgg gcgatctccg cctcccggag
420
ccgcagcttc tcccggagag acgcgttctc gctctccctg tccagcagcg cgatctgagc
480
tcactggaac ctccacctcc caggttcgag tgattctcct gcctcagcct cctgagtagc
540
tggtattaca gggtgccacc acta
564
```

<210> 6310
<211> 83
<212> PRT
<213> Homo sapiens

<400> 6310

```
    Cys Thr Pro Thr Ala Pro Gly Ser Ser Arg Pro Val Ser Leu Trp Gly
    1                   5                      10                      15
    Ala Gln Gly Pro His Gly Gly Arg Leu His Val Ser Gln Asp Gly Val
                20                      25                      30
    Leu Gln Glu Ala Arg Pro Leu Gly Leu Leu Val Pro Asp Ala Gly Asp
              35                      40                      45
    Leu Arg Leu Pro Glu Pro Gln Leu Leu Pro Glu Arg Arg Val Leu Ala
        50                      55                      60
    Leu Pro Val Gln Gln Arg Asp Leu Ser Ser Leu Glu Pro Pro Pro Pro
```

65   70   75   80
Arg Phe Glu

<210> 6311
<211> 1548
<212> DNA
<213> Homo sapiens

<400> 6311
nggtttggca agagaccaac ctcagctcag actttccatc tgagcacagc cgtttggcta   60

tgagcttttt actgaatttt atagcaactc tgatttcttc ctttaaatga ttggaggctt   120

tttaaagatc ttatggggct caaatactaa cttcataaat ggccttttga ataacagcag   180

caaataatct ctcagctgat atttcaattt actaaggaag cacaaattaa aacattcctg   240

ctacacagtc atgggctggc acatgtctgg ttggatgaat acaaggagca gtattttttcc   300

ttaagacctg acctgaagac gaaaagctat ggcaatatca gtgagcgtgt ggaactgaga   360

aagaagttgg gctgtaaatc atttaaatgg tatttggata atgtataccc agagatgcag   420

atatctgggt cccacgccaa accccaacaa cccattttttg tcaatagagg gccaaaacga   480

cccaaagtcc ttcaacgtgg aaggctctat cacctccaga ccaacaaatg cctggtggcc   540

cagggccgcc caagtcagaa gggaggtctc gtggtgctta aggcctgtga ctacagtgac   600

ccaaatcaga tctggatcta taatgaagag catgaattgg tttttaaatag tctcctttgt   660

ctagatatgt cagagactcg ctcatcagac ccgccacggc tcatgaaatg ccacgggtca   720

ggaggatccc agcagtggac ctttgggaaa aacaatcggc tataccaggt gtcggttgga   780

cagtgcctga gagcagtgga tccccctgggt cagaagggct ctgtcgccat ggcgatctgc   840

gatggctcct cttcacagca gtggcatttg gaaggttaag gtggatgctg tggcgggaac   900

gttgcttcat caggcgttgc ctccggtgtg gagtttgggg ctttaggaaa gcctgggttg   960

ggtggagcag aaccatcttg agaagatga cagttccctg tcctcccgga gatgcctggg   1020

tgtgttagca gaggtgacac gtgtctgaca gagacgggag ctctgagtgt ccacgggtga   1080

agaagtgagt gtccacgggt gaagaagtga gtatgtttca cctggacatt aaggtgatgt   1140

ttgagctgct gttaaggaat ttcttgctta tagaggcaaa ccacagtatc attttttaactc   1200

tagaattggg cttgtacaga aggataaaac ccaggaaaat ggatatttct attcagattt   1260

attttatgcct cttttttaatc ccctttaatg atgcagtggt ttttatctga tcaggaactt   1320

```
gtcatgattt cctttcttag acttcatagg agatagtgct ttaaaaaaaa aaaaacttct
1380
attatttgtt tagtatgttg taagtagatc attttaaaaa actgaatcta tattatgttt
1440
aacttcagaa ggcatcattt ataagacagt atggcagtta attataaaat tattttgatg
1500
aattatgata caatctacat aataaagaat ccttttgatt aaaaaaaa
1548
```

```
<210> 6312
<211> 234
<212> PRT
<213> Homo sapiens
```

```
<400> 6312
Gln Gln Gln Ile Ile Ser Gln Leu Ile Phe Gln Phe Thr Lys Glu Ala
 1               5                  10                  15
Gln Ile Lys Thr Phe Leu Leu His Ser His Gly Leu Ala His Val Trp
            20                  25                  30
Leu Asp Glu Tyr Lys Glu Gln Tyr Phe Ser Leu Arg Pro Asp Leu Lys
        35                  40                  45
Thr Lys Ser Tyr Gly Asn Ile Ser Glu Arg Val Glu Leu Arg Lys Lys
        50                  55                  60
Leu Gly Cys Lys Ser Phe Lys Trp Tyr Leu Asp Asn Val Tyr Pro Glu
65                  70                  75                  80
Met Gln Ile Ser Gly Ser His Ala Lys Pro Gln Gln Pro Ile Phe Val
                85                  90                  95
Asn Arg Gly Pro Lys Arg Pro Lys Val Leu Gln Arg Gly Arg Leu Tyr
            100                 105                 110
His Leu Gln Thr Asn Lys Cys Leu Val Ala Gln Gly Arg Pro Ser Gln
        115                 120                 125
Lys Gly Gly Leu Val Val Leu Lys Ala Cys Asp Tyr Ser Asp Pro Asn
        130                 135                 140
Gln Ile Trp Ile Tyr Asn Glu Glu His Glu Leu Val Leu Asn Ser Leu
145                 150                 155                 160
Leu Cys Leu Asp Met Ser Glu Thr Arg Ser Ser Asp Pro Pro Arg Leu
                165                 170                 175
Met Lys Cys His Gly Ser Gly Gly Ser Gln Gln Trp Thr Phe Gly Lys
            180                 185                 190
Asn Asn Arg Leu Tyr Gln Val Ser Val Gly Gln Cys Leu Arg Ala Val
            195                 200                 205
Asp Pro Leu Gly Gln Lys Gly Ser Val Ala Met Ala Ile Cys Asp Gly
    210                 215                 220
Ser Ser Ser Gln Gln Trp His Leu Glu Gly
225                 230
```

```
<210> 6313
<211> 725
<212> DNA
<213> Homo sapiens
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<400> 6313
tttttttttt tttttttttt tttttttttg gtaattaaca taatttatta cgcaaaaaat
60
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gagaaaatat acagcaggag ggatgaggag tacacatagg aaatttctgt gattttcttc
120
attttgatcg tattgctttc ttgtcttcag gagggaagat ttcgacttca aaagtaacaa
180
aatatttaag aagagaattc acatctttct gttctagctg gtattcttgc attattttct
240
cagcagtcca ggtttctggg aaaagcttat gattattgag aagtgtcaat gcttctacaa
300
tggaaatttt gcctttggga atgctcttaa tatttatcat atcaaaatga tggtctttcg
360
gcaatctgaa ttccttcggc tcttgacatg tttcagcagc ttttacctgc aaggaagaca
420
caggatcttt ggaatcaaca tacacatctt ttagaaacga cagcagcttt tcatctttac
480
gagcaatctc tcctttaact tctggataga gactaatctg ctctcgcagg aggctgttgg
540
tagaggggtg tctgggagcg acagagggct tcatcttgct gatttcccgt tccgctcggt
600
tctctaggtt gaaattcctg ataccgcgaa tcactagtgc tcccatctcc tcataacatt
660
atgcgctcag gttcaggccg cacgtgggaa caccggcgca ggacaactct cgggacaccc
720
ggagc
725
```

<210> 6314
<211> 175
<212> PRT
<213> Homo sapiens

<400> 6314

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Met Gly Ala Leu Val Ile Arg Gly Ile Arg Asn Phe Asn Leu Glu Asn
1               5                  10                 15
Arg Ala Glu Arg Glu Ile Ser Lys Met Lys Pro Ser Val Ala Pro Arg
            20                 25                 30
His Pro Ser Thr Asn Ser Leu Leu Arg Glu Gln Ile Ser Leu Tyr Pro
            35                 40                 45
Glu Val Lys Gly Glu Ile Ala Arg Lys Asp Glu Lys Leu Leu Ser Phe
        50                 55                 60
Leu Lys Asp Val Tyr Val Asp Ser Lys Asp Pro Val Ser Ser Leu Gln
65                  70                 75                 80
Val Lys Ala Ala Glu Thr Cys Gln Glu Pro Lys Glu Phe Arg Leu Pro
                85                 90                 95
Lys Asp His His Phe Asp Met Ile Asn Ile Lys Ser Ile Pro Lys Gly
            100                105                110
Lys Ile Ser Ile Val Glu Ala Leu Thr Leu Leu Asn Asn His Lys Leu
            115                120                125
Phe Pro Glu Thr Trp Thr Ala Glu Lys Ile Met Gln Glu Tyr Gln Leu
        130                135                140
Glu Gln Lys Asp Val Asn Ser Leu Leu Lys Tyr Phe Val Thr Phe Glu
145                150                155                160
Val Glu Ile Phe Pro Pro Glu Asp Lys Lys Ala Ile Arg Ser Lys
                165                170                175
```

<210> 6315
<211> 378
<212> DNA
<213> Homo sapiens

<400> 6315
caagaatcca ttgaagccag caagactgca ctttgtcctg aaagatttgt accctaagt
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gctcaaaaca gaaaacttgt ggaggccata aacaaggtc acattcctga gctccaggag
120
tatgtaaaat ataaatatgc aatggatgaa gctgatgaaa aaggatggtt tccattgcat
180
gaagctgttg ttcaacccat tcaacaaata cttgagattg ttctggatgc atcctataag
240
acactctggg aattcaagac ctgtgatgga gaaacaccct tgactttggc agtcaaagct
300
ggtctggtgg aaaatgtaag aactttatta gaaaagggag tgtggcccaa cacaaaaaat
360
gataaaggag agacccccc
378

<210> 6316
<211> 126
<212> PRT
<213> Homo sapiens

<400> 6316
Gln Glu Ser Ile Glu Ala Ser Lys Thr Ala Leu Cys Pro Glu Arg Phe
  1   5   10   15
Val Pro Leu Ser Ala Gln Asn Arg Lys Leu Val Glu Ala Ile Lys Gln
             20   25   30
Gly His Ile Pro Glu Leu Gln Glu Tyr Val Lys Tyr Lys Tyr Ala Met
         35   40   45
Asp Glu Ala Asp Glu Lys Gly Trp Phe Pro Leu His Glu Ala Val Val
     50   55   60
Gln Pro Ile Gln Gln Ile Leu Glu Ile Val Leu Asp Ala Ser Tyr Lys
65   70   75   80
Thr Leu Trp Glu Phe Lys Thr Cys Asp Gly Glu Thr Pro Leu Thr Leu
                 85   90   95
Ala Val Lys Ala Gly Leu Val Glu Asn Val Arg Thr Leu Leu Glu Lys
                100   105   110
Gly Val Trp Pro Asn Thr Lys Asn Asp Lys Gly Glu Thr Pro
                115   120   125

<210> 6317
<211> 1201
<212> DNA
<213> Homo sapiens

<400> 6317
nngggcccag aactacaact ctgcagcgaa agatagagat gcccttgaaa atgtgtcaca
60
ttcttaagat gtcttgccga agtagcaaga gcggagggtg actgtgtgag caggagcgag
120

```
agggcgccag ctcctgcggg ggaggttcct actgcgcgcc ccaccctgtg caagaatgtc
180
aggctttagg gcagctgcca taggccccag gggcatcagg actctgcctc tgaaccagag
240
ctgctttccc gactaacttc aatctggaga gatggtaagt tatctaaccg gctcttcttt
300
tggcgagact gctctttctc cttaatcaga gccccccatg ccctttgcag ctcagagtcg
360
tcttcctcag cgccaggcac cctgtgatcc actttcttcg tattctttt tttggtcttg
420
ggtgcagttc ctaggcgagt ccataaatta cctgatttct ctcccgagt atcggcgtag
480
aggcctttac tatcctgcct gggaacacct agcctactat gcacatcaga agagggctct
540
ctccgaacga cggggttact actaaaagcc ttttccggag aatgtggtct ttttcctaac
600
cgctggcgta tatctgattt agtactgctg actggtggcc gtggacggga gtgctgacgt
660
ttctcatcta atagatgtcg acatctgca aatttctcag gtggtaattt gttaccaatt
720
cggttttga tattgcttga agatacacta tctgccctca tggagttcct aatatttttc
780
aactgagatt ccacttcgtc agcatacata gtcattttca tgctttctt tggtgaaggc
840
gtggaaatca ttttcagttc tagatcatag tccatttcat ctgagtctga gctgctggca
900
ctggatcgtc tagacgcgct ccgctcccgg ggctgcttga gagccgggag ctcctcgtgg
960
tactctacca ccactctgtc atctgcatcc atgtcctggt cttcttcttc ctcttcctct
1020
tcctcctcct cctcctcttc ctcctcttca tgggttcct cgggaacatt cactagccca
1080
gaatgtcgat gtttatacga cgtcaagcca acgtcatccc caatcagggc tctcttcttg
1140
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1200
c
1201
```

<210> 6318
<211> 94
<212> PRT
<213> Homo sapiens

<400> 6318

```
Ser Ile Ser Ser Glu Ser Glu Leu Leu Ala Leu Asp Arg Leu Asp Ala
1               5                   10                  15
Leu Arg Ser Arg Gly Cys Leu Arg Ala Gly Ser Ser Ser Trp Tyr Ser
            20                  25                  30
Thr Thr Thr Leu Ser Ser Ala Ser Met Ser Trp Ser Ser Ser Ser Ser
            35                  40                  45
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Met Gly Ser Ser
        50                  55                  60
Gly Thr Phe Thr Ser Pro Glu Cys Arg Cys Leu Tyr Asp Val Lys Pro
```

```
  65                     70                     75                     80
Thr Ser Ser Pro Ile Arg Ala Leu Phe Leu Ile Thr Ser Arg
                     85                     90
```

<210> 6319
<211> 345
<212> DNA
<213> Homo sapiens

<400> 6319

gcgccgccgc tgtgggccgc ctccgcagcc ggccacctgg acgtggtgcg gagcctgctg
60

cgccgcgggg cctcggtgaa ccgcaccacg cgcaccaact ccacgcctct ccgcgccgcc
120

tgcttcgacg gccacctgga ggtggtgcgc tacctggtcg gcgagcacca ggccgacctg
180

gaggtggcca accggcacgg ccacacgtgc ctcatgatct cgtgctacaa gggccaccgt
240

gagatcgccc gctacctgct ggagcagggc gcccaggtga accggcgcag cgccaagggc
300

aacacggccc tgcatgactg cgccgagtcc ggcagcctgg agatc
345

<210> 6320
<211> 115
<212> PRT
<213> Homo sapiens

<400> 6320

```
Ala Pro Pro Leu Trp Ala Ala Ser Ala Ala Gly His Leu Asp Val Val
  1               5                  10                  15
Arg Ser Leu Leu Arg Arg Gly Ala Ser Val Asn Arg Thr Thr Arg Thr
             20                  25                  30
Asn Ser Thr Pro Leu Arg Ala Ala Cys Phe Asp Gly His Leu Glu Val
         35                  40                  45
Val Arg Tyr Leu Val Gly Glu His Gln Ala Asp Leu Glu Val Ala Asn
     50                  55                  60
Arg His Gly His Thr Cys Leu Met Ile Ser Cys Tyr Lys Gly His Arg
65                  70                  75                  80
Glu Ile Ala Arg Tyr Leu Leu Glu Gln Gly Ala Gln Val Asn Arg Arg
                 85                  90                  95
Ser Ala Lys Gly Asn Thr Ala Leu His Asp Cys Ala Glu Ser Gly Ser
                100                 105                 110
Leu Glu Ile
        115
```


<210> 6321
<211> 1442
<212> DNA
<213> Homo sapiens

<400> 6321

aagctttgcc agagtggttt ggctacagtc agctcttcta caggaagtgg cattttccac
60

```
ttgtgaaacg gtaggtcatt ccctgcctca tgcagaactc agccctgtgg agctccacca
120
cctggcccag gccctgccca catgcaacct cccggggtgg ccctcaatga cctgcacgtc
180
ccttcactct aaggaaccct gagttacagt ggccttaagg acatgtgtat ttagaagcct
240
ttgtgtacaa actagctctg tgcgctctca gtttaccgtc ctcacacttt attgttagct
300
gttctttaag tttctcacac attattggca attatgtaaa aatcaagaac ctctataaaa
360
caacctggct ttccaggtgg aattccgcat acagccaaaa ctggattcca gtgtggccag
420
acaacgccca tgtcccaatt taagagtcgc tgtcctcacc accatccgga gtggcctctc
480
tgtcagtgtg tgatgtggcc agggcagtgt ccacctgaac ttcctcctca tcggactgaa
540
caacggggga ctccccaccc tcactgatgt cccgggtggc cgagtcggtg caggtggagg
600
aagaagaagg tggcttggct cttaattctg agggatttgg aacctggagg gtaatctcat
660
tctgacaggt actggattca ggccctaagg cggggacag cacagtgttc tcttctcctc
720
cagagttcag gaagacgtcc agggcctcct ggtccgatat gtccatcagg tccatctgct
780
ccagcatgtc cacgttcact tccatggatg acatgctgcc tatgggctct cgccgctctg
840
caatctgcag gtagccagtg gacaggtact gctgctccat gtcctgctgg aaggcttcct
900
caaaaaactt ctgccgctcc ttcagcttca tttgctgggt gtgctccatt tccaggacct
960
tctgggcgtg ctctgcatct agttcagagg gatccctctg actattttcg gtgagtcctg
1020
gagatgacat ggatgtgaga cctgaatgag tgaacagaag ctcagtgctg gtcaagtgaa
1080
gcctccagtt accaggcagc tgccctcacg tgcatcttct gggatgtaga acaaaggaag
1140
tgaggctgaa gccagaagca ggttttttcca aagaaattgt agtaagccta ttagtttttt
1200
gctgatggct taagcagata tacattggaa tctactgcct ctataaaagc aaaatgcaag
1260
ctctcagggg ctctagtgtg caaagatgta tgcaccggtc tgggaccata ccaaatgcag
1320
ctcaaaatgg aggggaggga aggctgaaaa taactaaatc caacagaatt tgtcatctag
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gtacaaagat gctttagtaa cacagcaaaa gagagatgaa atcttgctgt ttgaaagtag
1440
ta
1442


<210> 6322
<211> 196
<212> PRT
<213> Homo sapiens
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<400> 6322
Met Ser Ser Pro Gly Leu Thr Glu Asn Ser Gln Arg Asp Pro Ser Glu
 1           5                   10                  15
Leu Asp Ala Glu His Ala Gln Lys Val Leu Glu Met Glu His Thr Gln
        20                  25                  30
Gln Met Lys Leu Lys Glu Arg Gln Lys Phe Phe Glu Glu Ala Phe Gln
        35                  40                  45
Gln Asp Met Glu Gln Gln Tyr Leu Ser Thr Gly Tyr Leu Gln Ile Ala
    50                  55                  60
Glu Arg Arg Glu Pro Ile Gly Ser Met Ser Ser Met Glu Val Asn Val
65                  70                  75                  80
Asp Met Leu Glu Gln Met Asp Leu Met Asp Ile Ser Asp Gln Glu Ala
            85                  90                  95
Leu Asp Val Phe Leu Asn Ser Gly Gly Glu Glu Asn Thr Val Leu Ser
            100                 105                 110
Pro Ala Leu Gly Pro Glu Ser Ser Thr Cys Gln Asn Glu Ile Thr Leu
        115                 120                 125
Gln Val Pro Asn Pro Ser Glu Leu Arg Ala Lys Pro Pro Ser Ser Ser
    130                 135                 140
Ser Thr Cys Thr Asp Ser Ala Thr Arg Asp Ile Ser Glu Gly Gly Glu
145                 150                 155                 160
Ser Pro Val Val Gln Ser Asp Glu Glu Glu Val Gln Val Asp Thr Ala
            165                 170                 175
Leu Ala Thr Ser His Thr Asp Arg Glu Ala Thr Pro Asp Gly Gly Glu
            180                 185                 190
Asp Ser Asp Ser
            195
```

What is claimed is:

1.   An isolated nucleic acid molecule encoding a polypeptide comprising an amino acid sequence that is at least 85% identical to a polypeptide including an amino acid sequence selected from the group consisting of SEQ ID NO:2n, wherein n is any integer 1-3161, or the complement thereof.

2.   The isolated nucleic acid molecule of claim 1, said molecule hybridizing under stringent conditions to a nucleic acid sequence complementary to a nucleic acid molecule comprising the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n- wherein n is any integer 1-3161, or the complement thereof.

3.   The isolated nucleic acid molecule of claim 1, said molecule encoding a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ II NO: 2n, wherein n is any integer 1-3161, or an amino acid sequence comprising one or more conservative substitutions in the amino acid sequence selected from the group consisting of SI ID NO: 2n.

4.   The isolated nucleic acid molecule of claim 1, wherein said molecule encodes a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ II NO: 2n, wherein n is any integer 1-3161.

5.   The isolated nucleic acid molecule of claim 1, wherein said molecule comprise the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n any integer 1-3161, or the complement thereof.

6.   An oligonucleotide less than 100 nucleotides in length and comprising at least · contiguous nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n is a integer 1-3161, or the complement thereof.

7.   A vector comprising the nucleic acid molecule of claim 1.

8.   The vector of claim 7, wherein said vector is an expression vector.

9   A host cell comprising the isolated nucleic acid molecule of claim 1.

10.   A substantially purified polypeptide comprising an amino acid sequence at least 80% identical to a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161.

11.   The polypeptide of claim 10, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161.

12.   An antibody that selectively binds to the polypeptide of claim 10.

13.   A pharmaceutical composition comprising a therapeutically or prophylactically effective amount of a therapeutic selected from the group consisting of:
a)   the nucleic acid of claim 1;
b)   the polypeptide of claim 10; and
c)   the antibody of claim 12;
and a pharmaceutically acceptable carrier.

14.   A kit comprising in one or more containers, a therapeutically or prophylactically effective amount of the pharmaceutical composition of claim 13.

15.   A method of producing the polypeptide of claim 10, said method comprising culturing the host cell of claim 9 under conditions in which the nucleic acid molecule is expressed.

16.   A method of detecting the presence of the polypeptide of claim 10 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing the formation of a complex between said polypeptide and said

compound. and detecting said complex, if present, thereby identifying said polypeptide in said sample.

17.   A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe (primer bound to the nucleic acid molecule of claim 1 is present in the sample.

18.   A method for modulating the activity of the polypeptide of claim 10, the methoc comprising contacting a cell sample comprising the polypeptide of claim 10 with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptid

19.   The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a ORFX-associated disorder, wherein said therapeutic is selected fro the group consisting of:
   a)   the nucleic acid of claim 1;
   b)   the polypeptide of claim 10; and
   c)   the antibody of claim 12.

20.   A method for screening for a modulator of activity or of latency or predispositio to an ORFX-associated disorder, said method comprising:
   a)   contacting a test compound with the polypeptide of claim 10; and
   b)   determining if said test compound binds to said polypeptide,
wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to an ORFX-associated disorder.

21.   A method for screening for a modulator of activity or of latency or predispositio: to an ORFX-associated disorder, said method comprising:
   a)   administering a test compound to a test subject at an increased risk ORFX-
          associated disorder, wherein said test subject recombinantly expresses a
          polypeptide encoded by the nucleotide of claim 1;

b)   measuring expression the activity of said protein in said test subject;

c)   measuring the activity of said protein in a control subject that recombinantly expresses said protein and is not at increased risk for an ORFX-associated disorder; and

d)   comparing expression of said protein in said test subject and said control subject, wherein a change in the activity of said protein in said test subject relative to said control subject indicates the test compound is a modulator or of latency of predispostition to an ORFX-associated disorder.

22.   The method of claim 20, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

23.   A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 11 in a subject, the method comprising:

a)   measuring the amount of the polypeptide in a sample from said subject; and

b)   comparing the amount of said polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of the polypeptide in step (a) as compared to the control sample indicates the presence of or predisposition to a disease in said subject.

24.   The method of claim 23, wherein said subject is a human.

25.   A method for determining the presence of or predisposition to a disease associated with altered levels the nucleic acid molecule of claim 1 in a subject, the method comprising:

a)   measuring the amount of the nucleic acid in a sample from the mammalian subject; and

b)   comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

wherein an alteration in the level of the nucleic acid in step (a) as compared to the coi sample indicates the presence of or predisposition to said disease in said subject.

26. The method of claim 25, wherein said subject is a human.

27. A method of treating or preventing a pathological condition associated with ai ORFX-associated disorder in a subject, the method comprising administering to said subject polypeptide of claim 10 in an amount sufficient to alleviate or prevent said pathological condition.

28. The method of claim 27, wherein said subject is a human.

29. A method of treating or preventing a pathological condition associated with ai ORFX-associated disorder in a subject, the method comprising administering to said subject nucleic acid molecule of claim 1 in an amount sufficient to alleviate or prevent said patholog condition.

30. The method of claim 29, wherein said subject is a human.

31. A method of treating or preventing a pathological condition associated with ar ORFX-associated disorder in a subject, the method comprising administering to said subject i antibody of claim 12 in an amount sufficient to alleviate or prevent said pathological conditio

32. The method of claim 31, wherein said subject is a human.